

# MANUFACTURERS RECORD

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## Manufacturers Record.

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FRANK GOULD, Vice-President.  
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RICHARD H. EDMONDS,  
Editor and General Manager.

EDWARD INGLE, Managing Editor.

ALBERT PHENIS,  
General Staff Correspondent.

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BALTIMORE, APRIL 13, 1911.

### SOUTHERN FACTORY PRODUCTS.

Factories in seven Southern States produced in 1909 articles valued at \$1,293,144,000, an increase of \$330,983,000, or something more than 34 per cent. over 1904. In last week's issue of the MANUFACTURERS RECORD the figures for five of these States were given. Since then the figures for South Carolina and Georgia have been announced by the Census Bureau. These show that the increase was in South Carolina from \$113,422,000 to \$173,221,000, or 53 per cent. in capital, and from \$79,376,000 to \$13,236,000, or 43 per cent. in the value of products, and in Georgia from \$135,212,000 to \$202,913,000, or 50 per cent. in capital, and from \$151,040,000 to \$202,641,000, or 34 per cent. in the value of products.

#### J. F. MERRY.

After 31 years' service with the Illinois Central Railroad Co., Capt. J. F. Merry, for a long time its general immigration agent, will retire under the pension system of the company. This announcement will be received with regret by every man who knows what an important factor Captain Merry has been in the material development of the South, especially that portion of it traversed by the lines of the Illinois Central and the Yazoo & Mississippi Valley railroads. Typical of his achievements is the transformation since 1884 of a siding in the pine woods of Tangipohoa parish, Louisiana, with less than a dozen families near by, into the beautiful city of Hammond, with a population of 3500, a pioneer in early fruit and truck growing in that part of the

South. Scattered through three or four States of the lower Mississippi Valley are other flourishing communities, the direct results of Captain Merry's intelligent, zealous and farsighted work in attracting to Southern agricultural and industrial opportunities the thrifty men of other sections. He has given nearly half of his life to that work, for he is only 67 years of age. He has earned the right to comfort and ease, and all of his friends will rejoice to know that he is well fixed as to worldly goods, but they will regret that he will not spend the rest of his days in the South, but will remain in his beautiful 280-acre farm home near Manchester, Iowa.

It happens that coincidentally with the announcement of his retirement to ease with leisure the Louisiana State University has issued as one of its bulletins the address recently delivered by Captain Merry at Baton Rouge on the awakened South, in which he sketched in most vivid style the resources and the energies of the 14 Southern States. We shall always have in grateful remembrance his allusion in what may be regarded as his valedictory to the South:

If I were to speak of the one agency in Maryland that is doing more than all others in the United States to develop "The Awakened South," I should refer to the MANUFACTURERS RECORD, published at Baltimore.

### ADVERTISING A CITY RIGHT.

About a year ago the MANUFACTURERS RECORD had the pleasure of recording an exceedingly practical manifestation of business enthusiasm in behalf of a city's development in the prompt subscription to a fund of \$300,000 as a cash bonus to assure the building at Oklahoma City of a packing plant by Schwarzschild & Sulzberger, representing an investment of \$3,000,000. The proposition was made to the city and was promptly accepted. A meeting called for the purpose by the Chamber of Commerce was attended by more than 1000 citizens, and in less than half an hour the necessary amount was over-subscribed. That feat in right advertisement of a city, by which is meant advertisement that results in definite additions of benefit to the community, was in a certain sense a cumulative effect. Less than nine months before there had been organized as an adjunct to the Chamber of Commerce the Oklahoma Industrial Co., composed of about 400 of the leading professional and business men of the city, with a capital of \$400,000. The immediate purpose of the organization was to give a bonus of \$300,000 to Morris & Co., packers, for the establishment of a plant in Oklahoma City, \$150,000 to be paid when the plant began operations and \$150,000 one year subsequently. The twenty-first annual report of the Chamber of Commerce tells how the plan worked out.

The Industrial Company bought 570 acres of land adjoining the property of the packers, divided it into tracts for

residences and placed it on the market in October, 1909. Local real estate dealers heartily co-operated, and at the close of the business year December 1, 1910, the company had sold 2450 lots for \$680,000. With 1964 lots still remaining unsold, but steadily increasing in value, the company, after deducting the money paid for the property, the money for the bonuses and other incidental expenses, had a balance in its treasury. The larger portion of the first payment was advanced to Morris & Co. before the opening of the plant, which began operations October 3, within less than one year from the beginning of construction, as one of the largest and most up-to-date packing plants ever constructed. This building achievement completely transformed within a few months an undeveloped district into a flourishing neighborhood, and, as the report states, it was all done without costing the citizens one cent, but giving a great impetus to the industrial development of the city, as well as benefiting every farmer, stock-raiser and property-holder in Oklahoma.

One of the notable features of this primary packing plant enterprise was the fact that when the second one of the kind was proposed a representative of Morris & Co. heartily approved of it on the ground that there was room enough for both plants, as one could not develop the field. That spirit is necessary for the success of every movement for the industrial expansion of communities, whether they were born yesterday or have a century of accomplishment behind them. The only point to be considered is whether the field for a particular industry can be developed by existing plants managed upon a strictly business basis. It is probable that in some parts of the country there are cities or towns which have their full quota of manufacturing plants of particular kinds. But the number of such places is very small, and there is hardly a city in which manufactures have succeeded that cannot make successes of other kinds of manufactures. To secure them either local capital must be forthcoming liberally or capital must be brought from other quarters. In either event the manufacturers on the ground must be willing to welcome the new undertakings.

The experience of Oklahoma City is strikingly illustrative of that which must underlie all efforts for the up-building of communities. Its power is indicated by the fact that the census of 1910 showed a population in Oklahoma City of less than 65,000. Of that population, 1100 firms and individuals have membership in the Chamber of Commerce. What other city in the country has one-sixth of its population represented in a business organization bent upon turning everything to good account for the material welfare of the city? At this distance the Oklahoma City organization impresses us as a body formed with a clearly defined purpose and concentrating all its energies

upon carrying out that purpose. It wastes no energy in firing salutes with blank cartridges; it is loaded for bear, and does things instead of talking about what ought to be done, and its members are not content with the payment of annual dues and attendance upon an occasional meeting to hear reports from an executive officer, or upon an aimless banquet, but they take such an active personal interest in all its affairs that whatever it does represents the actual mind of its membership. Such an organization is possible in a hundred communities of the South, and the very fact of its existence is a practical advertisement appealing directly to men of affairs looking for fields in which to invest their money.

### SOUTHERN ENTHUSIASM FOR IMPROVED HIGHWAYS.

Bearing upon an interview with the editor of the MANUFACTURERS RECORD upon the pressing importance of first-class highways in the South, the Atlanta Constitution says:

What promises to become an epidemic of good roads building by bond issues is in evidence in Georgia, as the result of *The Constitution's* several "Around-the-State Good Roads Tours."

Troup county led off with a bond issue of \$200,000 devoted exclusively to good roads.

The two latest proposals—separated by only twenty-four hours—come from Bibb and Emanuel counties.

Bibb already is numbered among the banner good-roads counties of the State, but is not satisfied.

Her County Commissioners have decided to call an election for the forthcoming fall, in which the people will be asked to vote on the issuance of bonds aggregating \$325,000. Of this amount \$100,000 is to be expended upon roads and \$200,000 upon bridges.

The County Commissioners of Emanuel called a mass-meeting at Swainboro recently to discuss the advisability of a roadway bond issue. It was the most representative meeting held in the county within recent years. By a vote of three to one enthusiastically to call the election.

It is unnecessary to look far for the causes astic citizens called upon the Commissioners producing this State-wide agitation of highway construction by the bonding method.

Thoughtful and conservative taxpayers of Georgia are rapidly realizing that it is the safest, most expedient and direct plan to secure an imperative improvement, with posterity shouldering its share of the expense for a benefit in which it will participate even more largely than the current generation.

Particularly pertinent in this connection is an interview with Richard H. Edmonds, editor of the MANUFACTURERS RECORD, published elsewhere today under a Savannah date line.

Mr. Edmonds has spent the past few weeks motoring through the South, and has therefore had abundant opportunity to observe conditions and sound sentiment.

He views good roads as comprising an economic issue of greater importance than State or national taxation, or even tariff revision.

He also emphasizes a fact often cited by *The Constitution* when he declares that enhanced values following road construction and improvement will more than cover original expense and upkeep.

The assertion is borne out by the experience of communities all over the country.

For instance, the \$3,000,000 bond issue recently voted by Fulton county for public improvements is to be retired without raising the tax one mill, the increased revenue and

enhanced values flowing from the improvements making this device unnecessary.

The same result is even more assured with bonds for roadways.

The Georgia county that does not take advantage of its credit to loosen within its borders the foremost stimulator of development will soon confess itself as lacking in the initial elements of enterprise.

The epidemic of bond issues for the construction of improved highways seems likely to spread through the whole South from Maryland to Texas. Within that region millions of dollars of bonds have already been voted in large spots, especially in Texas, Maryland, Virginia, North Carolina, Tennessee, Alabama and Florida, either through the Legislatures or in counties or districts, and, in addition, much first-class work is being done through direct local taxation. The bond issue, however, is the most advanced symptom of the epidemic for good roads in the South, which is certain to be brought to most desirable ends through the influence of the number of great plans appealing strongly to the imagination and having a most practical purpose in view. In Maryland the State is constructing several main thoroughfares that will ultimately affect to the good all sections of the State. State co-operation is working out excellently in Virginia, where there are also well-defined projects for broad stretches of roads that will give a continuous highway from the Hampton Roads basin through the capital of the State to the Piedmont section, connecting there with the route to Washington and over the first range of the Appalachians into the beautiful Valley to a junction with a portion of the New York to Atlanta route. Over in Kentucky there is talk of converting the old Wilderness Road into a modern highway, uniting the highlands with the bluegrass regions. West Virginia has \$900,000 available for work in 1911. North Carolina is to have its unsurpassed Appalachian attractions made accessible through a system of roads that will constitute a part of a great scenic highway, taking in South Carolina, Georgia, Tennessee, Virginia and Kentucky, and joining to another highway leading to the sounds. It will not be long before San Antonio and New Orleans will be connected by a highway through Texas and Louisiana. Tennessee is preparing to spend two days in August in making certain a highway more than 500 miles long across the State from Memphis to Bristol. One may reasonably expect in a few years another route along the Gulf Coast through Louisiana, Mississippi and Alabama into Florida, and the last-named State is a hotbed of practical enthusiasm for good roads, one of the leading projects being the securing of a route between Jacksonville and Atlanta to form part of the Atlanta-New York highway. That plan seems destined to enlarge, so as to assure a first-class route from New York to Montreal, Canada, thus giving a straight-away course of more than 1200 miles through the whole eastern portion of the United States, connecting with such individual enterprises as that of Gen. T. Coleman Dupont in Delaware, and systems in New England, Pennsylvania and individual Southern States.

The Tennessee project is fundamentally a case of constructing sufficient lengths of roadway to link up into one highway existing stretches of roads, some of them already in first-class condition. In many parts of the South such fine stretches are to be enjoyed, but the pleasure of a continuous trip is marred by the failure to complete the

necessary links, and the careful observer will also note that the enthusiasm if not properly directed is likely to end in much bad work in good-roads construction. However, all of that can be avoided; mistakes of the past can become profitable lessons for the future, and it seems certain that the completion of the magnificent across-State or interstate highways which dominate so much of Southern thought on this subject will bring about the improvement and linking up of county roads, just as the movement in some quarters has extended to the practice of individual landowners equipping their farms with splendid roads.

#### USING THE MANUFACTURERS RECORD.

The wide range of uses made of the news and advertising pages of the MANUFACTURERS RECORD is indicated in letters recently received by us from advertisers and readers in different parts of the country. Mr. W. W. Austin of the H. R. Ameling Prospecting Co., diamond-drill contractor, St. Louis, Mo., in appreciation of "up-to-date service covering the lines of business endeavor" in which his company is interested, writes:

We have patronized clipping bureaus, and have taken a number of magazines, both general and technical in scope, in an effort to get "up-to-the-minute" information concerning new projects in the particular line that interests us, i. e., any project that might require the use of a diamond core drill in demonstrating its value, or the practicability of construction work requiring a solid bed rock foundation. The MANUFACTURERS RECORD more nearly fills our requirements in this particular than all other sources of information we have been able to reach, and your publication is certainly a welcome weekly visitor to our desk.

In continuing an advertisement, E. H. Miller of Miller & Coulson, builders' material, Pittsburg, Pa., writes:

We received more answers from one insertion in your journal than from ten insertions in any of the others.

The Ben I. Tanner Land Co. of Cedar Rapids, interested in Southern and Western lands, writes:

We are pleased with results obtained from our small ads. in the MANUFACTURERS RECORD. We shall probably try it on other propositions.

The Georgia Tie, Lumber & Real Estate Co. of Savannah, referring to a five-line ad., says that results have been satisfactory and that further advertisements will be given us in a very short time.

The Tuscaloosa Concrete & Supply Co., Inc., Tuscaloosa, Ala., writes:

In our own experience we find that the prompt and accurate information pertaining to contract work furnished by the MANUFACTURERS RECORD is of great help and interest to us in our business.

Mr. E. S. Shannon, secretary Board of Trade, Nashville, Tenn., in renewing subscription, says:

We would not under any circumstances consider cancelling our subscription to your valuable paper. In our opinion, the MANUFACTURERS RECORD is a genuine booster for the South. We have a special file in our library for this publication, and rest assured that we see to it that not a single issue is ever missing from the file.

Another subscriber, Mr. O. N. Petree, Walnut Cove, N. C., cashier of the Bank of Stokes County, writes:

The issue of March 23 is easily worth the whole subscription.

H. C. Mauer & Co., architects and superintendents, Beaumont, Tex., write:

We can frankly state that the MANUFACTURERS RECORD is a strictly up-to-date paper, boosting the South constantly and highly appreciated by the Southern people in general.

#### THE SOUTH AND THE INTERNATIONAL CONGRESS OF APPLIED CHEMISTRY.

The importance of the Eighth International Congress of Applied Chemistry, which is to open at Washington September 4, 1912, with President Taft in the chair, and to continue its sessions in New York City September 6-13, is indicated by the subjects to be considered by the sections and subsections of the gathering. These include metallurgy and mining, explosives, silicate industries, coal tar colors and dye-stuffs, industry and chemistry of sugar, India rubber and other plastics, fuels and asphalt, fats, fatty oils and soaps, paints, drying oils and varnishes, starch, cellulose and paper, fermentation, agricultural chemistry, organic chemistry, inorganic chemistry, analytical chemistry, pharmaceutical chemistry, bromatology, physiological chemistry and pharmacology, photo-chemistry, electro-chemistry, physical chemistry, hygiene, law and legislation affecting chemical industry and political economy and the conservation of natural resources. The various committees of the congress are representatives of more than 4000 American chemists, and President Taft is so solicitous for the success of the meeting in this country that he has caused invitations to it to be sent to all the governments of the world, and it is hoped that through the efforts of the chemists of the world, individually and collectively as societies, the various interest in their respective countries may be properly represented.

The first international congress of chemists met at Karlsruhe in the fall of 1890 with 140 chemists of Europe in attendance, but the next one of the kind did not meet until July, 1899. In connection with the Chicago Exposition in 1893, a third gathering was held with about 200 men present, and out of it, at the suggestion of Dr. H. W. Wiley, was born the First International Congress of Applied Chemistry, which was held at Brussels in 1894. Subsequent meetings have been at Paris, 1896; Vienna, 1898; Paris, 1900; Berlin, 1903; Rome, 1906, and London, 1909. Three thousand members attended the last congress, and the thirteen delegates sent by the Government of the United States were appointed as the organizing committee for the 1912 meeting.

That committee understands that the purpose of the 1912 session in this country is especially to emphasize the manufacturing side of chemistry. For that purpose to be realized fully to the advantage of foreign visitors and of the industries of this country, opportunity should be made by representatives of American manufacturing to bring to the notice of as many members as possible of the congress, and particularly of the foreign visitors, the vast resources in the United States for the practical application of chemical science in many lines.

The South would work for its material gain if leading men of that section actively engaged in its mineral and manufacturing and lumber and agricultural development, directly and indirectly, could induce what have been called excursion meetings of the congress, to give its members opportunity to know at first hand of the oil and gas and sulphur, the zinc and lead and phosphate rock, and the water-powers of the South, and what is already being done in their utilization in a way that appeals to leaders in applied chemistry. It is not at all unlikely that individual

members of the congress will pay visits to special fields, the head of the greatest chemical establishment of Europe, for instance, having announced his intention of coming to the congress if he can have a chance to inspect Louisiana's sulphur, salt and oil deposits. But inspection by individuals cannot have the far-reaching effects of visits by large bodies of members of the congress representing it as a whole. To insure such visits, however, a considerable sum of money will be required. That money raised among Southern men who would thus entertain the members of the congress would be money well spent.

#### RAILROAD TIES OF SOUTHERN WOODS.

Ties made of cypress appear to be growing in favor with railroad builders, according to the report of a statement made before the Railroad Maintenance of Way Association recently at Chicago. They are now, it is said, used in all parts of the country, although heretofore they have found service almost exclusively in the South, especially where tracks had to be laid on ground more or less wet.

It must not be supposed, judging from this, that cypress ties constitute a large proportion of the total number of ties used, but their employment is increasing, and their wider field of usefulness will doubtless familiarize railroad men with the excellent qualities of cypress wood and cause a greater demand for them, thus providing a market for the products of extensive forests in the South. At present the total number of cypress ties purchased by the railroads amounts to only about 4 per cent. of the total in any year. Thus in 1909, the last year for which statistics are available, there were only 4,580,000 cypress ties in a total of 123,751,000 bought by the railroads. The largest number reported was in 1907, a great construction year, when 6,780,000 cypress ties were purchased in a total of 153,703,000. In 1908, when there was comparatively little spent by railroads, only 3,457,000 cypress ties found a market in a total of 112,466,000.

Oaken ties are more used than any other kind, but next to them come those of Southern pine, the value of which in track has long been recognized by construction men. Thus in 1909 there were 21,385,000 ties of Southern pine bought by the railroad companies; in 1907 the sales amounted to 34,215,000, or more than half of the total number of oak ties purchased. It is possible that cypress ties may find favor equal to those of Southern pine, although the wide distribution of the latter wood may cause ties made of it to lead cypress in numbers sold indefinitely. Cypress is especially valuable because of its ability to resist decay. This quality is well known by all who have observed the wear of cypress shingles. It was stated at Chicago that the Missouri Pacific Railway has used large numbers of cypress ties, but it recommends that they should be made of the heart of the timber. The Seaboard Air Line and the Central of Georgia Railway are also mentioned as roads upon which they are employed in track construction. The Rock Island, the Southern Pacific and the Santa Fe systems are reported to be making satisfactory tests of cypress ties.

Gum is another Southern wood which is being used for railroad ties of late years. It seems, according to the figures published annually by the Department of Commerce and Labor, that four



years ago there were scarcely any ties of this material. The statistics for 1907 report that only 15,000 ties of gum were used in that year, but in 1908 there were 262,000 and in 1909 378,000, and presumably there was another considerable increase in 1910, although the figures for that year are not yet published.

The increasing scarcity of tie timber in various parts of the country is having its effect, and those concerned are looking to other sections for a supply of the woods to which they have been accustomed, or, if they cannot be obtained, other woods which may be suitable. Cypress and gum are plentiful in some portions of the South, and their advantages as tie timber may be pushed forward to the advantage of both producers and purchasers. While the steel tie has proved its efficiency, and will doubtless be used considerably in years to come, it is not going to drive out the wooden tie, which, because of its cheapness and reliability, will continue to be in great and greater demand.

#### THE PENALTY OF PUBLICITY.

There is one troubled soul down in Louisiana who makes an agonized outcry of protest against the overwhelming discomfort of fame which the MANUFACTURERS RECORD has brought upon him, and, indeed, it is one of the most flagrant cases of forcible and protracted projection into the limelight, on the showing the gentleman makes, of which the MANUFACTURERS RECORD or any other newspaper has ever been accused. We have frequently received minor complaints of the same kind, as, for instance, when some correspondent would write, "I am going to want some new machinery before long, but please don't say anything about it now, for I would be deluged with letters from your advertisers," or another would make complaint that his office force had been swamped in taking care of the replies which some inquiry in our columns had brought forth. Such experiences have lost their novelty and are received here as a matter of course. But in such cases the tempest usually blows over after a while. The man may receive a bushel or more of letters every day for a week or so, but in the course of time, the occasion for the inquiry and the deluge having been fulfilled, there ensues a season of immunity and calm. Not so in the case of the Louisiana victim, however, according to advices received from a staff correspondent at New Orleans. He writes:

Mr. George U. Borde threatens to sue us for damages, both punitive and compensatory. Borde tells me that ever since he wrote that article for us, nearly three years ago, about a process which as mechanical engineer he investigated in France for obtaining ethyl alcohol from pine sawdust, he has been so pestered with letters of inquiry from all over the world that serious inroads on his time have been made and an embarrassing increase in postage bills brought about.

"I certainly had no idea it was loaded," said Mr. Borde to me today. "Why, the way you reach the people is simply amazing. It seems as though an article printed in the MANUFACTURERS RECORD is given immortal life. I was surprised somewhat at the number of letters of inquiry I received immediately after my article appeared, and I was considerably annoyed over the time it took from my business to answer the letters. But when I saw there was no let-up I became furious. Finally, when I found the returns coming in from all over the world and continuing without end, I drafted a form of reply and had it multigraphed. When such a letter of inquiry comes in now I simply toss it over to my stenographer with the simple word of instruction, 'alcohol.' I have thus systematized the working end of the matter, so that my regular professional affairs are not so seriously interfered with, but I have

computed that my extra postage bill has averaged 17½ cents a day ever since the article was printed, and if I don't bring suit against the MANUFACTURERS RECORD for loss of time, injury to business and expense for stenographer hire and postage, I certainly think you should make overtures for an amicable settlement out of court."

#### SOUTHERN CITIES' FACTORIES.

Gratifying advance in industry at Jacksonville, Fla., is shown in the figures of the census bureau for factories in 1904 and 1909. In the five years there was an increase in capital from \$4,837,000 to \$6,965,000, or 44 per cent.; in the value of products from \$5,340,000 to \$6,578,000, or 23 per cent., and in the number of salaried officials and clerks from 274 to 379. The average number of wage-earners, however, decreased from 2650 to 1980.

In the five-year period the capital in factories at Frederick, Md., increased from \$1,421,000 to \$2,370,000, or by 67 per cent., and the value of products from \$1,938,000 to \$2,911,000, or 50 per cent. There was a slight decrease in the average number of wage-earners.

Reports for a number of Missouri cities have been made. At Joplin the capital increased from \$2,524,000 to \$2,922,000 and the value of products from \$3,006,000 to \$4,136,000. At Sedalia the increase was in capital from \$1,307,000 to \$2,346,000, and in the value of products from \$1,692,000 to \$2,333,000. Other increases were at Hannibal, from \$1,848,000 to \$2,498,000 in capital and from \$3,564,000 to \$6,195,000 in value of products; at Moberly, from \$503,000 to \$1,320,000 in capital and from \$801,000 to \$1,984,000 in value of products, and at Webb City from \$190,000 to \$462,000 in capital and from \$638,000 to \$777,000 in value of products.

#### MORE SOUTHERN FISHERIES.

Louisiana, as is the case with other Gulf States, has increased the value of its fisheries in recent years. But it is not dependent upon the waters of the Gulf, as it has fisheries along the Mississippi River and its tributaries. The value of its fisheries products in 1908, according to the census bureau, was \$1,569,000, oysters leading, with \$763,000; shrimp second, \$213,000; catfish third, \$143,000. Among the more than 40 species of fish caught were squeeteague, Buffalo fish, channel bass, croakers, sheepshead, carp, crappie, pike, perch and suckers, while terrapin, soft crabs and alligator hide are included among the fisheries products.

Georgia's fisheries yielded in 1908 to the value of \$701,000, according to the census bureau. Oysters, valued at \$339,000, formed 48 per cent. of the products, there having been a decided increase since 1897, when their value was but \$87,000; shad ranked second, \$190,000, and red snapper third, \$30,000. All other species, including catfish, sea bass, squeeteague, whiting, prawn, terrapin, etc., had an aggregate value of \$142,000.

#### THE COTTON MOVEMENT.

In his report for April 7 Col. Henry G. Hester, secretary of the New Orleans Cotton Exchange, shows that the amount of cotton brought into sight during 219 days of the present season was 10,832,204 bales, an increase over the same period last year of 1,663,942 bales. The exports were 6,681,884 bales, an increase of 1,671,016 bales. The takings were, by Northern spinners, 1,778,964 bales, a decrease of 5646 bales; by Southern spinners, 1,711,217 bales, a decrease of 7551 bales.

The paper by Mr. Frederick G. Clapp of Pittsburg on the occurrence of oil and gas accumulations in formations having monoclimal dips has been reprinted in pamphlet form from economic geology.

## Electric Power for Eastern North Carolina.

[Special Correspondence Manufacturers Record.]

Raleigh, N. C., April 10.

At last the MANUFACTURERS RECORD can be furnished with full and definite information regarding the great power development which the Carolina Power & Light Co. of Raleigh will make, or, rather, is making, increasing its capital stock from \$3,250,000 to \$7,500,000. The Yadkin River Power Co. is a subsidiary company of the one above named, and was formed to take over and complete the great plant at Blewitt's Falls, on the Yadkin River near Rockingham, on which approximately \$2,000,000 has been expended by what was the Rockingham Power Co. This property was sold by the receiver, and was bought in by E. Clifford Potter, treasurer of the Colonial Securities Co. of Boston, who now executes a deed for it to the Yadkin River Company. This deed has been filed here and in the counties of Richmond and Anson. A mortgage has been filed by the Yadkin River Company to the Old Colony Trust Co. of Boston, which provides for an issue of \$15,000,000 of 5 per cent. 35-year bonds for the completion of the plant and for the construction of much transmission line, etc.

The Blewitt's Falls' plant will furnish 40,000 horse-power. Work on it, suspended for several years, is again actively in progress, and a large force and much machinery is employed there under the direction of Mr. Abbott. To give an idea of the size and height of the dam it may be said that it in one section rises 76 feet above the river bottom. It is interesting to know that Blewitt's Falls and Buckhorn Falls (the latter on the Cape Fear River, and which has been for three years furnishing power) are the most easterly water-powers in the State. Hence they are the keystones to the power situation in this section of North Carolina.

The company will distribute power from Raleigh as the center of its operations. Its Buckhorn Falls transmission line, 26 miles long, comes here. Work on the survey for the 100-mile transmission line from Blewitt's Falls is in progress at both the Raleigh end and that at the falls. The company will cover mills, etc., at Rockingham and Hamlet, N. C., and McCall and Dillon, S. C., and other points near the southern end of the line which are in easy reach of its developments. The line from Blewitt's Falls will connect with that from Buckhorn Falls.

The company has bought a tract of land two miles west of Raleigh, alongside the Seaboard Air Line and the Southern Railways, and on this will erect a spacious building, something like 200 feet, long for its substation and storage point. It is surveying for a transmission line to make Forest, Youngsville, Franklin, Henderson, Kittrell and Oxford, these being points north of Raleigh, and also for another line to Clayton, Selma and Goldsboro, branching off at Selma and going by way of Smithfield and Dunn to Fayetteville, where it will again connect with the Carolina Power & Light Co.'s line from Buckhorn Falls, which has a Fayetteville branch.

The construction will be up to date in every respect, and there will be a network of transmission and distribution lines, which cover a large area of the east-central and the eastern section of the State. The policy of the company will be the carrying of power to all points which offer sufficient inducements in the way of factories, contracts for lighting, etc. It will really be a case of "first come, first served." The company will have the 40,000 horse-power from Blewitt's Falls, the 6500 from

Buckhorn Falls and 6500 developed by the admirable new steam auxiliary plant at Raleigh, which is the "last word" in electrical machinery, so that a total of more than 50,000 horse-power will soon be available. The effect upon the communities in this section may be imagined. One result will be a notable extension of Raleigh's electrical railway system, and another the development of new industries here and at many other points.

The great electric company at the head of which are the Dukes, has a great and important field in the center of the State, and it has all it wants to do. This great eastern company, with headquarters at Raleigh, has its own field also.

North Carolina is thus leading all the South in electrical development. Its water-power plays a magic part in this vast scheme. A gentleman who was here today from the North, and who had been all over the world, says it is his deliberate belief that this section will in the next few years make more progress than New England in 25 years.

In other words, the MANUFACTURERS RECORD is everlastingly right in its declaration that the South is the coming section of the country. And do not fail to keep your eyes on North Carolina. Here is where things come to pass.

FRED A. OLDS.

#### FOR STATE IMPROVEMENT.

Constructive Acts of the North Carolina Legislature.

[Special Cor. Manufacturers Record.]

Raleigh, N. C., April 7.

For the readers of the MANUFACTURERS RECORD the writer has prepared a brief summary of what may be termed the constructive work provided for by the Legislature of North Carolina, which recently ended its session. It made some very fine provisions for additions to the public buildings, first of all being the \$250,000 State building. The sum of \$50,000 was provided for each of the next two years for new buildings at the State University at Chapel Hill, of which Dr. F. P. Venable is president; \$15,000 annually for buildings at the Agricultural and Mechanical College at Raleigh, of which Dr. D. H. Hill is president, and the State Board of Agriculture is directed to build a \$30,000 building at this college for the department of animal industry. For the State Normal and Industrial College for Women, at Greensboro, \$25,000 is given for a new building. The Legislature appropriated \$25,000 annually for a new type of rural schools to be known as "farm high schools," and there are to be 10 of these, the counties which decide to take them being required to provide the land and a building to cost not less than \$25,000. Provision is made for a water supply equipment at the Deaf Mute School at Morganton to cost \$10,000, and for a \$10,000 building at the Stonewall Jackson Training School for Boys at Concord.

A great step is taken in provision for what is to be known as the Central Highway, a public road from the coast to the Tennessee line; in other words, from Beaufort to Marshall, a distance of about 525 miles. An appropriation of \$50 per mile is made, and towns along the route in the 20 counties through which this road will pass are to make appropriations based upon population, and gifts are to be received, numbers of these being promised, some by men of wealth and influence and others by corporations of various kinds. Governor Kitchin had for many months warmly favored this plan. On the 20th of

April the highway trustees named by the Legislature will meet here to make arrangements. It is the plan to select a time in the late summer and have many thousands of men at work on this highway, and thus contributions will be made in labor, money and materials. It is expected to pass through such well-known points as Newbern, Goldsboro, Raleigh, Durham, Greensboro, High Point, Salisbury, Statesville, Morganton and Asheville.

Builders will be interested in knowing that the Legislature has provided for the building of courthouses by four counties—Alleghany at Sparta, Pitt at Greenville, Hoke at Raeford and Avery at Montezuma.

Never was so much done for public highways as by this Legislature. In some cases a direct issue of bonds was ordered without an election; for example, \$500,000 in Forsyth county, one of the most progressive in the State, and elections are to be held on bond issues for the same amount in Rockingham and Robeson; for \$300,000 in Randolph, \$400,000 in Iredell, \$200,000 in Anson and Cumberland, \$100,000 in Pender, Montgomery, Lee, Beaufort, Harnett and Stanley, \$250,000 in Orange, and in more than a score of counties for an issue of less than \$100,000. Never was there such a good-roads movement in North Carolina. It has a world of meaning. The farmers are behind it now, and they are certainly a power in North Carolina; practically out of debt, many with more money than they have ever had before and taking a broader view of things and recognizing their State's great opportunity.

Then, too, there is a wonderful movement for drainage of farm lands, this not only in the east, but in the Piedmont section, where the success last year in this new field endeavor have been so marked as to greatly impress the public. The vast drainage scheme in and around Lake Mattamuskeet will be under way before the spring ends, and that in itself is a very notable stimulus. The Legislature created many new drainage districts.

In the way of plans for railway construction the Legislature did many things, and chartered nearly a score of roads, chief among these being the Raleigh, Charlotte & Southern, the survey for which is now in progress, and which will be almost an air line, parts of it being now already in operation. Then there is the Central Carolina, from Goldsboro to Charlotte; the Forsythe & Yadkin, the Greensboro,

Roxboro & Norfolk, the North Carolina Central, from Nash and Franklin through Durham or Wake, part of this line being now in operation; the Durham & Danville, the Maxton, Alma & Southbound, the Hiwassee, in Clay and Cherokee counties, in the high mountain region. The Roanoke & Mt. Airy Southern is authorized to build to Mt. Airy and have that thriving town as its southern terminus.

The Legislature took an important step by providing that cities and towns can build water-works and other public utilities without special act. It also enacted a new labor law, making 60 hours a week the limit in factories, and as to railway employees it requires that none of them shall work more than 16 hours in succession.

FRED. A. OLDS.

### The Birmingham Iron Market.

[Special Cor. Manufacturers Record.]

Birmingham, Ala., April 10.

The volume of business transacted in the pig-iron market during the past week was hardly as large as was expected, and there are indications of a disposition among the buying interests to await further developments before entering the market for their advanced requirements. Report is made of the sale of two round tonnages for delivery during the remainder of the year, but with those exceptions the demand was for small lots for prompt shipment, without any disposition to pay a higher price than \$11 per ton Birmingham. As at the time of last report, producing interests generally are adhering to an advance of 50 cents per ton over the \$11 schedule for deliveries during the last quarter. A schedule of \$11.25 per ton Birmingham has been realized for third quarter deliveries, but the tonnage placed at such figures is comparatively small. Reports to the effect that a \$11 Birmingham basis could be shaded for spot shipments are not given credence, as no iron can be located that is available at a lower price. It was not shown by the blast-furnace statistics that the aggregate of stocks in this district increased during the month of March, notwithstanding the fact of a long month and the addition of two active furnaces to the output during the month. With the actual reduction of 2000 tons, as shown, the shipments during the month of March exceeded those of February by some 15,000 tons. The iron in warrant yards is included in the aggregate stock report, con-

sequently the excess in shipments can but indicate an increase in the consumption to the same extent, as no melters have stocked iron on their yards. The feeling in trade circles is generally an optimistic one, owing to the close adjustment of the output to the consumption, and an early improvement in the demand is predicted. In some cases repairs are being made to idle stacks, but nothing definite has been announced as to the probable date of resumption of operations at any idle plants. There are at present 16 stacks being operated in this district on foundry iron, three on basic iron and two stacks producing charcoal iron. This out of a total of 43 stacks considered available for operation.

The situation in the cast-iron pipe market is practically the same as at the time of last report. No new contracts are being advertised, but manufacturers are confident of sufficient new business to warrant the steady operations of plants now running, and are accordingly adhering strictly to quotations in submitting bids. The aggregate tonnage placed during the past week was some 1000 tons of water pipe, which consisted of several small lots. Water pipe continues to be quoted as follows f. o. b. cars here, viz.: Four-inch to six-inch, \$22; 8-inch to 10-inch, \$21; 12-inch, \$20.50; over 12-inch, average \$20, with \$1 per ton extra for gaspipe.

The coal and coke markets are improving slowly, and the output is being gradually increased. The present condition of these markets is largely due to the inactivity at furnace plants, but the daily output has been closely adjusted to the consumption.

The old-material market is quite without any features of especial interest. All recent inquiries have had individual consideration, and very few sales have been made other than were considered bargains by the purchaser. The prices received are very much at variance, and we can quote dealers' quotations nominally only. Dealers' quotations are as follows per gross ton f. o. b. cars here, viz.:

Old iron axles, \$14 to \$14.50.  
Old iron rails, \$12 to \$12.50.  
Old steel axles, \$14 to \$14.50.  
No. 1 railroad wrought, \$12 to \$12.50.  
No. 2 railroad wrought, \$9 to \$9.50.  
No. 1 country, \$7.50 to \$8.  
No. 2 country, \$7 to \$7.50.  
No. 1 machinery, \$9.50 to \$10.  
No. 1 steel, \$10 to \$10.50.

Tram car wheels, \$9 to \$9.50.

Standard car wheels, \$12 to \$12.50.

Light cast and stove plate, \$8 to \$8.50.

The local branch of the Armour Packing Co. will soon be located in its new building, which was erected at a cost of approximately \$175,000. The lot is 75x165 feet, and the building is of reinforced concrete.

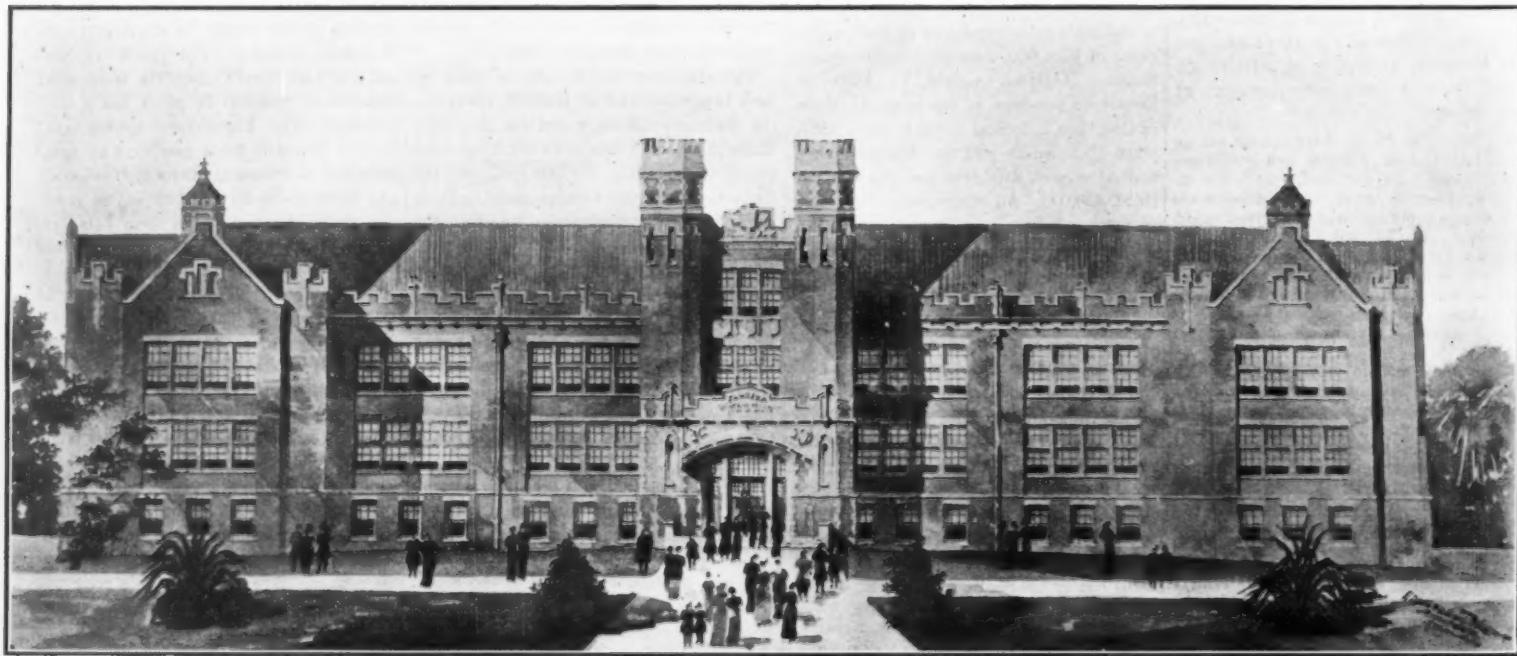
The building permits issued in Greater Birmingham during the past week were quite in keeping with the records of several weeks previous, and all indications point to a very active period for all building trades. Ground will soon be broken for the office building of the American Trust and Savings Bank, and in addition to the proposed structures recently mentioned, three other buildings of importance are now under consideration. It is now estimated that some \$200,000 has been expended at Corey, a suburb of Greater Birmingham, for homes for the employes of the American Steel & Wire Co.

The new shops of the Louisville & Nashville Railway at Boyles, Ala., will be ready for occupancy about October 1. This plant when completed will represent an expenditure of some \$700,000, and will furnish steady employment for 500 to 750 skilled employes.

### Supply and Machinery Men.

At the close of the joint convention at Louisville, Ky., last week officers of the American Supply and Machinery Manufacturers' Association were elected as follows: Willard Parker, Spring City, Pa., president; N. A. Gladding, Indianapolis, first vice-president; D. K. Swartwood, Cleveland, O., second vice-president; C. H. Jenkins, Louisville, third vice-president; W. H. Fisher, Chambersburg, Pa., chairman executive committee. Other members of the committee are: E. A. Ludden, Detroit; R. T. Hodgkins, New York; John W. Macomb, New York, and J. E. Osgood, Pawtucket.

Officers of the Southern Supply and Machinery Dealers' Association were elected as follows: W. P. Simpson, New Orleans, La., president; S. M. Price, Norfolk, Va., first vice-president; I. F. Young, Birmingham, Ala., second vice-president; Alvin M. Smith, Richmond, Va., secretary-treasurer; H. C. Clark, Charlotte, N. C., chairman executive committee; W. H. Banks, Huntington, W. Va., chairman manufacturers' and conference committee.



FLORIDA STATE COLLEGE FOR WOMEN, TALLAHASSEE.

View of buildings about completed; brick; three stories; 236 feet long; 168 feet deep through rear wing and 85 feet at ends; contain auditorium seating 1100; 21 lecture-rooms, 21 practice-rooms, 12 laboratories, 10 storerooms, 6 music studios, 4 art studios, administration offices, dean's offices, book store, library and office of Talisman; cost, \$100,000; architect, W. A. Edwards of Atlanta; contractor, Nicholas Ittner of Atlanta.



# GREAT ELECTRIC RAILROAD FOR THE CAROLINAS

[Special Correspondence Manufacturers Record.]

Charlotte, N. C., April 11.

It is especially interesting at this time, when work is progressing rapidly at both ends of the interurban electric railway that is to connect Charlotte (N. C.) on the north with Greenwood (S. C.) on the south, to give some idea as to the construction of what is to be one of the most modern electric railways ever built. This electric railway is the result of most careful study on the part of the promoters. Engineers foremost in their profession were consulted and the plan thoroughly gone over before any outside move was made, resulting in the fact that the road was practically assured before the public became aware that such a railway was being contemplated.

To give some idea how carefully and with what keen foresight the plans in detail represent for the economical and yet rapid handling of trains, it is only necessary to point out that the railway is to have a 1 per cent. compensated grade; the effect is, there is no additional power required when the trains encounter curves. For every degree of curvature grade is reduced 0.04 per degree of curvature per 100 feet on maximum grade, and the maximum curves used, except entering stations, is 6 per cent. curves—about 955 feet radius.

The roadbed is to be 20 feet in cuts and 18 feet on embankments for single track, and it is proposed at some future day to double-track this road. The crossties are 7 inches by 8 inches by 8 feet, so placed that about 2816 crossties will be used per mile, and as there is about 126 miles of road, there will be needed no less than 354,816 crossties, not including sidings, which are to be placed every three miles. The rails will be 80 pounds per yard, making approximately 125 tons of rail to the mile; the track is to be ballasted with crushed stone, making it equal to the best roadbed now built, and rendering it possible for the trains to attain high speed, as well as to haul the heaviest loads. The bridges will be of heavy steel truss construction, 5500 pounds per linear foot, of first-class material and workmanship in every respect.

In this connection it is worthy of note that contract is to be let on the 20th inst. for the bridges over the main Catawba and South Fork Catawba rivers in North Carolina, and over the Reedy and Saluda rivers in South Carolina; also five passes at the tracks of other railroads. There will be five additional bridges between Greenville and Spartanburg, S. C.; also four underpasses at the Southern Railway, as it is a feature of the interurban that no railroads will be crossed at grade, but it will either go under or over grade, and all dirt-road crossings are as carefully avoided if possible.

The equipment has not been fully decided upon, but will probably consist of heavy cars (60 tons weight) for passengers. The overhead trolley will be employed. While the exact nature of this equipment is not determined as yet, it is safe to say that it will be ample to handle a passenger business equal to or greater than that of competing roads. The freight equipment will be of ordinary freight cars of from 30 to 50 tons capacity, to be hauled with articulated electric locomotives of such weight and power as to handle from 50 to 60 cars in a train. It is also intended to switch freight cars billed to points along the interurban on to its tracks—whole trains if necessary—and haul them to their destination.

The terminals at Greenwood, Belton, Greenville and Charlotte have been agreed upon, with Greenwood as the southern terminus of the road, which will pass through or near Donalds, Belton, Pelzer, Piedmont and Greenville, S. C. From Greenville to Spartanburg, S. C., the line is now in course of location, but not fully determined; also from Spartanburg by way of Gaffney and Blacksburg to Kings Mountain, N. C., a route is being located. From Kings Mountain the road passes through Bessemer City, Gastonia and Lowell to Mt. Holly, N. C., where a connection is made with the Seaboard Air Line, but an independent road will also be built to Charlotte, N. C., from which city no route north has been determined for the interurban.

The work in South Carolina from Greenwood to Spartanburg, contract for which was awarded W. J. Oliver & Co. of Knoxville, Tenn., is being rapidly pushed to completion; in North Carolina, the work from Kings Mountain to Charlotte, Stewart & Jones of Baltimore contracted to have this portion of the line finished in six months from date of contract, and the work is forging ahead.

Although no schedule has as yet been prepared, there is no question but that such an one will be worked out as will give ample accommodations for all traffic offered, and it is a notable fact in connection with the building of this electric railway that the company has contracts signed

by hundreds of the business men in the territory its service will reach, pledging at least one-half of all their freight as soon as the road is in a position to handle it.

The line from Anderson to Belton, S. C., nine miles, is now being operated as a passenger line; the lines in Greenville, S. C., known as the Greenville Traction Co., are also being operated for passengers, but separately from the Greenville, Spartanburg & Anderson Railway; the lines in Charlotte, N. C., are also being operated as independent lines from the Piedmont Traction Co.

Referring to the terminals of the road, it is sufficient at this time to say that they will be up to date in equipment, and it is the policy of the company to get its terminal stations close into the heart of the business center of each community, so as to give patrons of the road every possible advantage and convenience. For that reason no expense has been spared to secure property needed.

The road in South Carolina is chartered as the Greenville, Spartanburg & Anderson Railway, and in North Carolina as the Piedmont Traction Co. A recent charter, however, has been obtained in South Carolina, in which these two companies will be merged at some future time as the Piedmont Northern Railway Co.

The officers of both companies are J. B. Duke, president; W. S. Lee, vice-president; Thos. B. Lee, chief engineer, and J. P. Clark, consulting engineer. The offices of the company, with Mr. W. S. Lee in charge, are located in Charlotte, N. C.

J. LOUIS SPENCER.

## THE SOUTH AND WORLD DEMAND FOR COTTON.

Strong Appeal of President Hobbs of the National Association of Cotton Manufacturers

Much of the address of President Franklin W. Hobbs of Brookline, Mass., at the annual meeting this week in Boston of the National Association of Cotton Manufacturers, dealt with the world's supply of cotton. President Hobbs said:

"It is undoubtedly true that the consumption of cotton is steadily increasing each year, and it seems equally true that this increase in consumption will continue. It is estimated that there are now on the earth 1,500,000,000 people, of whom only 500,000,000 are completely clothed, while 750,000,000 are only partly clothed and 250,000,000 practically do not possess any clothing at all. It is further estimated that to clothe the whole of humanity would require 42,000,000 bales of cotton each year instead of about 17,000,000, the last year's production of the world. The number of cotton spindles in the world has increased from 165,700,000 in 1900 to 134,500,000 in 1910, or 27.3 per cent. The fluctuations in the world's supply of cotton are measured practically by the variations in the production of cotton in our country, as we produce over two-thirds of the supply. The world consumption of cotton for the year ended August 31, 1910, is estimated by the United States Census Bureau at 18,079,000 on the basis of bales of 500 pounds net weight, and the production for 1909 amounted to only 16,558,000 bales net weight, or 1,521,000 bales less than the consumption. The world's consumption for the year ended August 31, 1909, was 19,297,000 bales net weight. With increases of machinery which have been made, it is evident that the consumption of the mills of the world on full time would be not less than 20,000,000 bales.

"The query thus arises: Where will the additional amount of cotton needed for the world and its increasing population come from? This is a question which up to the

present time has occupied the attention of the English spinners more than our own, but it seems we are as vitally interested as any nation, for whatever affects one nation today affects every nation, and we may well consider briefly the situation as it is today and as it may be in the near future. The production in 1909 may be considered in round numbers, on the basis of net weight bales, as follows:

	Bales.	Per cent.
United States.....	10,000,000	59.6
India.....	3,000,000	21.8
Egypt.....	800,000	5.5
Russia.....	700,000	4.3
China.....	600,000	3.6
Brazil.....	350,000	2.2
Other countries.....	500,000	3.0
	16,650,000	100.0

"In the first place, let us consider our own country. We have gone ahead without much effort and raised, as stated, fully 70 per cent. of the world's product. We are now just beginning to realize the possibilities of the problem.

"The United States Department of Agriculture has been making experiments and investigations for years, and they are but now beginning to bear practical results, and I believe in the near future we shall see great improvements in methods of cultivation and in the character and quantity of cotton if the farmers will generally avail themselves of the services given so freely by the Government. In this respect we lead the world, and we ought to receive the benefits.

"I think I am not too optimistic to believe that from the present acreage the production could be doubled if proper methods were used, and it is along such lines that our friends in the South must work to secure the best results for themselves and the spinners. To improved methods of cultivation we must add a better method of picking, which is so much before us at present and which is certain

to be realized in time, and a general improvement in every step and process between the planting of the seed and the delivery of the cotton to the mill. We have too long drifted. The time is now ripe for concerted and determined action if we are to maintain our commanding position.

"If we turn to the other side of the world we find the English spinners especially, and to a great extent those on the Continent, determined to increase the production of cotton, equal to American cotton, outside of our country. In this determination the British Cotton Growers' Association, with the aid of the National and Colonial Governments, is very much in earnest, as are all the members of the International Federation of Master Cotton Spinners' and Manufacturers' Associations. This entire subject was discussed by Professor Dunstan in a report which he presented to the International Congress of Tropical Agriculture held in Brussels in May, 1910, and in the official report of the International Committee of the Spinners' and Manufacturers' Associations, held in London in November, 1910, especial stress was laid on the importance of continuous experimental work under Government auspices, as the problem in most countries is to establish an acclimatized type of cotton suitable for the spinners. Progress, while at present slow, seems to be steady.

"The Egyptian Government has now created a department of agriculture, which has been needed so long to afford guidance and aid to the cultivator and to conduct experiments. In this connection it is a pleasure to note that Professor Dunstan stated in speaking of American cotton: 'This report, moreover, emanates from one of the best equipped and most efficient agricultural departments in existence. As agriculturists and as men of science we may pay a tribute to the enterprise and far-sightedness of the Government of the United States in having organized and maintained a department which has been able to render such signal service to the agriculture, not only of our own country, but to all those countries where agriculture is of first-rate importance, and most of all, in those in which cotton cultivation is carried on.'

"While the outlook in Egypt is not considered satisfactory, the possibilities of Egyptian agriculture have been enormously increased by the construction of the Assuan Dam, and it is hoped in the near future to bring a large area under cotton cultivation in the Anglo-Egyptian Sudan. The Government is prepared to grant substantial financial aid to the farmer who engages in the production of cotton, thus removing one of the great obstacles in the development of the industry. With the establishment of the department of agriculture, the increased water supply and the financial aid of the Government, we may well expect great development in Egypt.

"West Africa presents one of the most promising new fields, and cotton cultivation and experimental work is being carried on there in the colonies and protectorates of Great Britain, France, Germany and Belgium. In portions of that country cotton cultivation has been carried on for centuries by the natives. It is a somewhat coarse and short staple cotton, and now the problem is to extend the area and to produce a kind that will be suitable to the country and fill the requirements of the European spinners.

"In Nyasaland success seems to have been met, and a new cotton to be known as 'Nyasaland Upland' has been established. This cotton is said to be fully equal to the best 'American Upland,' and to satisfy the tests given it by Lancashire

spinners. Uganda is also a promising field, and progress has been made in other parts of West Africa, especial attention being drawn to the developments which will probably follow the opening of the Northern Nigeria Railway.

"India is another country with great possibilities. Many experts claim that in four or five years India could produce a crop of 10,000,000 bales of cotton, and others state that the present acreage under cotton alone would suffice to produce a crop equal to that of the United States if proper methods of cultivation were introduced. While it is true that a certain prejudice has existed against India cotton, that will be overcome as the quality improves, as a result of a better understanding of conditions. In India there is an excellent department of agriculture, a great agricultural population, and the cotton plant is indigenous to the soil, for its fiber has been used in making cloth for thousands of years. Add to that the capital and energy of the British interests, and I believe we may expect with certainty a great cotton crop in the near future in that country. While Indian cotton may not be suitable for use in our mills or those of England, every bale raised there will be used for some purpose, and means the displacement of a bale of American cotton.

"In the same report accounts are also given of the progress made in cotton cultivation in French, German, Dutch, Portuguese and Italian colonies, as well as in South America, the South Sea Islands, Japan and China. In the latter country alone the production of coarse cotton has now grown to 600,000,000 pounds annually, and it is expected that amount will be increased.

"Such in brief is a summary of the work that is being done in other parts of the world to increase the production of cotton, and in this work the British Cotton Growing Association is the most active and aggressive agency. The British Government has decided to assist its operations by the grant of \$50,000 a year for a term of years, and it is believed that the Chancellor of the Exchequer will substantially assist the work in the Sudan. With such activities abroad, are we fully alive to the situation at home and its possibilities?

"Our Government, through the work of the Department of Agriculture, is now trying to make not only two ears of corn and two blades of grass, but two bales of cotton to grow where one grew before, and this great work deserves our hearty support and commendation.

"What can we as an association do to further the great work of this department of our Government? What can we do to make the cotton-growers realize the necessity of action along the lines recommended by these officials, able and untiring in their activities to increase the quality and quantity of cotton? Think of it, gentlemen, the rest of the world is actively trying to find means to increase the production of cotton, and we continue in the old ways of producing and handling, and, it is safe to say, little improvement has been made in years. How long shall we let this condition continue?

"It has been estimated that only about one-third of the available area within the cotton belt of our country is at present cultivated, and the future extension will depend on the desire of our farmers to plant a greater acreage and to adopt more scientific methods of cultivation, which will result in a greater yield per acre.

"We have the natural conditions needed, scientific knowledge unequalled in the world, and all we need is to apply this knowledge to the God-given soil and climate, and we can well raise 50,000,000

bales of cotton! I trust that as a nation we may realize the possibilities of the situation, and not stand still while other nations reap the benefit of our experience and take from our grasp the supremacy we have so long held as the greatest producers of cotton in the world. We are continuously increasing our manufactures of cotton, and as a national policy, in time of peace or in time of war, we must do what we can to maintain our unquestioned supremacy in the production of raw cotton."

In opening his review of the year, Secretary C. J. H. Woodbury said:

"The last year has been a most active one in the history of the association, both in regard to its efforts and its accomplishments, the event of the most material value to the cotton manufacturing interests having been that of the passage of the forest conservation bill, and although the measure was not as complete as the original form, yet it will eventually be of the greatest value to all users of water-power in protecting the headwaters of the Appalachian or White Mountains, of navigable

streams flowing into the Atlantic Ocean. The officers of this association appreciated the importance of this measure from the first and advocated its passage as a purely business proposition, and they enlisted the efficient services of other associations whose members were users of water-power in the territory affected. It is expected that the State of New Hampshire will materially co-operate by adding to the tract coming under the law numerous other forest properties which are being rapidly denuded.

"It must be clearly understood that these measures do not contemplate the deprivation of the people from the legitimate yield of the timber growth of the forests, and there is no doubt but that the portions around these headwaters so affected by this legislation will follow the experiences of European countries, where the practice of forest conservation has enormously increased the commercial yield. While it is understood that the experiences of affluent owners of a conserved forest tract at the South have obtained a satisfactory invest-

ment, they do not claim to have equaled the enormous increase of the value of the output which has been experienced in continental Europe, where it has reached the enormous increase of four times the former yield.

"It must be clearly understood that those most conversant with the subject do not claim that the difference will be at once noticeable in the diminution of certain classes of floods and the increase of the summer flow of these rivers and their also noticeable differences of rainfall which occur at rare and irregular times, but in due time the summer flow will be increased, as has already been the case in one of the rivers of New England, whose watershed now consists of abandoned farms which have grown up to birches to such an extent that the material increase of wooded area has added to the summer flow.

"The whole community is deeply indebted for the passage of this legislation to the Honorable John W. Weeks, member of Congress, who has ably advocated and carried this bill through to enactment."

The program of this annual meeting of the association included an address of welcome by Governor Eugene N. Foss, with reply by Mr. R. M. Miller, Jr., of Charlotte, N. C.; an address by President Richard C. Maclaurin of the Massachusetts Institute of Technology; a demonstration of picking cotton by machinery, by Theodore C. Price of New York, and papers by Walter S. Williams, Boston, Mass., on efficient buying of raw material; by James A. Lowell, Boston, on workmen's compensation; by John Sturgis Codman, Boston, on standardization of artificial illumination in cotton mills; by R. M. Miller, Jr., Charlotte, N. C., on arbitration on cancellation of orders; by Walter S. Newhouse, New York city, on uniform contracts; by Henry G. Bradlee, Boston, on certain limitations on scientific efficiency; by Albert F. Bemis, Boston, on co-operation between departments of the Federal Government and textile manufacturers; by George V. S. Michaelis, New York city, on the safeguarding of employees in the cotton industry; by William B. Hartshorne, Lawrence, Mass., on laws on regain in cotton and worsted; by Godfrey M. S. Tait, New York city, on power from producer gas; by Charles H. Eames, Lowell, Mass., on the function of technical education in training for the textile industry, and by C. J. H. Woodbury, Lynn, Mass., on textile education among the Puritans.

#### Refrigeration.

The American Association of Refrigeration, J. F. Nickerson, secretary, will have its second annual meeting at Chicago May 9-10. The proceedings will include the presentation of the annual reports of the chairmen of the various committees and commissions, detailing the activities of these bodies during the past year, as well as their recommendations for future efforts. Reports by the official delegates to the Second International Congress of Refrigeration in Vienna, Austria, in 1910, and of the committee appointed to investigate the claims and proposals of the several cities desirous of securing the Third International Congress, which is to convene in the United States in 1913, will be received and acted upon. It will also devolve upon this meeting to determine what steps shall be taken in preparation for the Third Congress, to obtain national and international recognition and co-operation for it, and if possible to formulate a code of procedure for its control and management, as well as to create a complete American congress organization and such subsidiary, auxiliary and tributary bodies as will insure carrying the important work to a successful issue.



UNION NATIONAL BANK BUILDING, HOUSTON, TEXAS.

Illustration represents \$400,000 building in course of construction; 70x130 feet; 13 stories and basement; fireproof construction; steel frame; stone and brick; architects, Mauran & Russell of St. Louis and Houston; contractor, Westlake Construction Co. of St. Louis.



COHEN BROS. PROPOSED DEPARTMENT STORE AND OFFICE BUILDING.

Building illustrated will be erected at Jacksonville, Fla.; 215x315 feet; four stories; four passenger and two freight elevators; vacuum cleaning system; steam heating; electric lighting; ice-water plant; mail chute; pneumatic tubes; telephone system; power plant for manufacturing; cost about \$600,000; architect, H. J. Klutho of Jacksonville; contractor for concrete, terra-cotta and brick work, Cramp & Co. of Philadelphia.



## Modern Town in an Erstwhile Indian Reservation.

[Special Correspondence Manufacturers Record.]

Tulsa, Okla., April 8.

About three years ago I gave to the readers of the **MANUFACTURERS RECORD** an exhaustive story touching the lands embraced within the boundaries of the Osage Nation, the natives of which are the wealthiest, per capita, of any people on the face of the earth. At that time Pawhuska, the capital, was so insignificant as to be considered only incidentally. The progress of the place, however, within the past few years has been so phenomenal as to render it an objective point not only of Oklahoma, but of capitalists in other parts of the country.

Osage county (Nation) has a gross area of 1,500,000 acres of land, the greater per cent. of which is still in a state of nature, used for pasturage only, for which it is

which Osage has never experienced, and never can; for the entire country is divided into parcels of equal acreage, over one of which each Indian is lord and master, with power of alienation of all save the homestead. Title to Osage land, unlike title to land of the so-called Five Civilized Tribes, is, perhaps, the best title that one possibly can have, there being but five transfers involved in the entire chain of title. 1. The Government of France to the United States. 2. The United States to the Cherokee Indians. 3. The Cherokee Indians to the United States in trust for the Osage Nation of Indians. 4. The United States and the Osage Nation of Indians to the individual members constituting the Osage Tribe of Indians. 5. The individual Osage Indian to the pur-

agreeable. The climate is delightful. The summers are relieved by the ever-present breezes, and the winters are short, mild and pleasant. The schools are equal to the best. The people are of a high average standard of character, and their intellectual attainments and social life compare well with those of older communities. All the leading religious denominations are represented. There is a creditable line of mercantile institutions which supply all the necessities and most of the luxuries of modern life. There is a civic spirit, as evidenced by its zealous Chamber of Commerce, and public improvements are going forward rapidly.

Pawhuska, the name meaning "White Hair," was derived from an illustrious Osage chief. Centrally located in and the capital of the old Osage Nation, now the county-seat of Osage county, on the Midland Valley Railroad, six miles from the intersection of that road with the Mis-

streets of the city. All the sidewalks are of concrete. The Pioneer Telephone Co. maintains an 800 capacity central, with five operators rendering service night and day. Two gas systems are in operation, one owned by the city and the other by private company. Gas for domestic purposes is furnished as low as 10 cents per thousand, and for commercial as low as two cents. The city owns an electric-light and power plant, and furnishes current for both domestic and manufacturing purposes. A good volunteer fire department, equipped with adequate apparatus, affords ample protection to all parts of the city. There are three hotels, one the Duncan, being a new, thoroughly modern, fireproof hotel of 60 rooms. There are also numerous restaurants, apartment, rooming and boarding-houses. Four banks, three operating under National charters and one under a State charter, have aggregate resources of \$1,035,051.10, capital \$135,



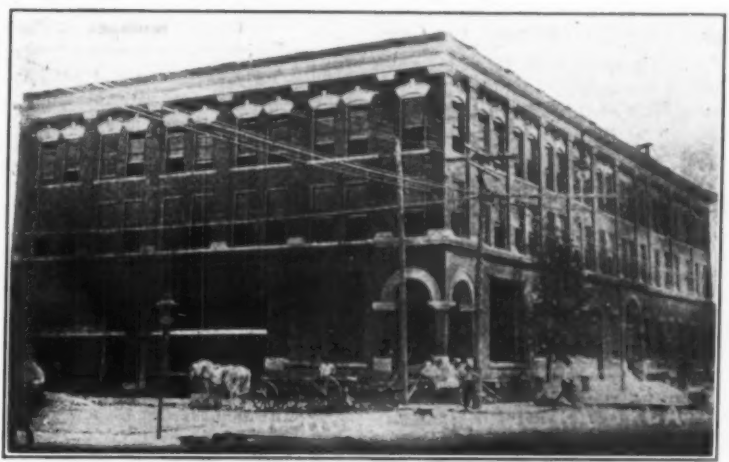
OSAGE INDIAN AGENCY BUILDINGS.



A PAWHUSKA STREET.



FRANKLIN SCHOOL.



NEW DUNCAN HOTEL.

famous. It has 200 square miles more land than the State of Delaware, and over 1000 more than Rhode Island.

All this land belonged to the Osage Indians as a tribe until June 28, 1906, when Congress divided the land and allotted 657 acres to each member of the tribe in fee, subject to conditions. Later Congress provided a plan whereby each Indian could dispose of 497 acres of the original 657 acres allotment (160 acres retained as homestead for a period of 25 years), and now, if the Government deems the Indian competent to transact his own business, he is the arbiter of his own fortune and can sell his 497 acres surplus land as he sees fit. Where the Indian is not considered competent to manage his own affairs the Agency takes charge and auctions off his 497 acres to the highest bidder. In this way large tracts of land are constantly being made available for settlement and cultivation by white men without any of the undesirable features of an "opening,"

chaser. There is also an easy plan of payment in force with regard to land of incompetent Indians; these are sold at auction by the Agency. One-quarter of the amount must accompany the sealed bid; one-quarter must be paid in two years; one-quarter in three, and the remaining quarter in four years from the date of sale.

Pawhuska began as an Indian trading post when the Osages came to this section, and the Agency was established here in 1872, but about four years ago the Government laid out and sold a beautiful town-site, and since that the growth has been steady until now Pawhuska is a thoroughly modern city of 5000 people, with none of the conditions of a mere boom town. The business district is built up of substantial two and three-story brick and native stone buildings, and the residences are handsome and modern, while the reflection of the local taste in artificial conditions is thoroughly creditable. No modern convenience is wanting. The general conditions are

southern, Kansas & Texas Railroad, and 50 miles from Tulsa. There is a motor car which runs over the Midland Valley tracks, making connection with all Missouri, Kansas & Texas trains. Its population was 2408 by the census of 1907 and 5045 by a special census taken the early part of 1910. Its area is approximately two square miles, and it is slightly over 800 feet in the business section of the city, that part of the residential section located on the hill being about 100 feet higher. The mean annual temperature is 58.6 degrees; average annual rainfall, 42.28 inches. The assessed valuation of city property in 1910 was \$1,642,766, exclusive of all railroad property. The city owns her own waterworks. The water supply, taken from Bird Creek, has proven to be adequate at all times. Added to its almost perfect natural drainage, the city has a complete sewerage system, installed at a cost of \$40,000. Contracts are about to be awarded for the paving of all the principal

000 and deposits \$788,825.84. Of public buildings there are the city hall, a three-story native stone building valued at \$40,000, and the Osage Indian Agency, comprising the Agency building, three stone school buildings and 15 official residences, all on the Government reservation of 83 acres.

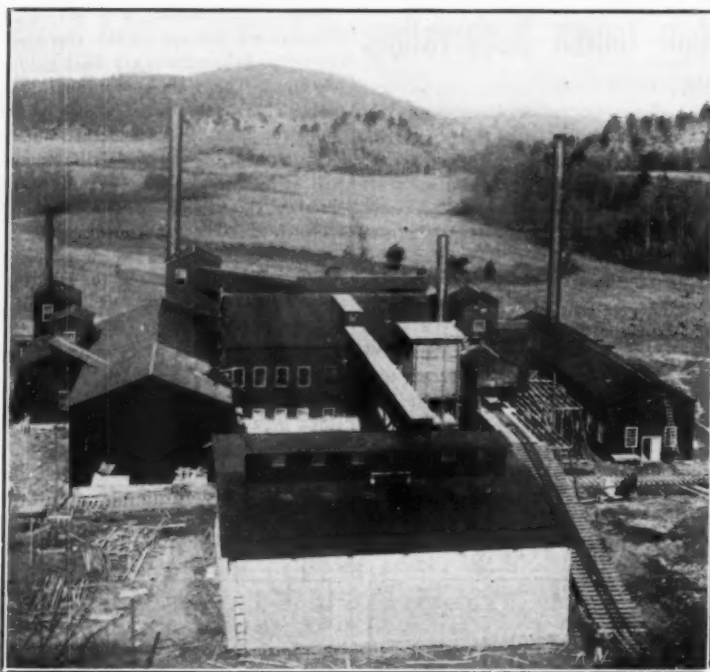
Each of the leading religious denominations has its own church edifice, and there is a new \$20,000 brick and stone Catholic church nearing completion. The public school system consists of three ward schools, with a kindergarten maintained in connection with each and a full four years' high-school course conducted in one of the school buildings. The Agency maintains separate schools for the Indian boys and girls. The Catholic church has its own parochial school and a boarding school for girls, with an enrollment of over 1000 pupils during the past year; a teaching force of about 30, and special instructors in music and drawing. In all, Pawhuska

has seven brick and stone school buildings that cost \$150,000. She has two weekly papers. There are 14 lodges, all in good standing; also an opera-house with seating capacity of 500, and airdome and two moving-picture theaters. There are natural parks, groves and many creeks which furnish ideal surroundings for outdoor recreation.

An ice company operates an ample plant and sells ice at prices that compare favorably with those of the larger cities. The town now has two brick plants, one of 60,000 daily capacity, in full operation, making the several grades of brick. Another company has secured title to land immediately east of the city and begun the erection of a 100,000 daily capacity plant. A three-stand cotton gin is in course of construction, and will be completed in time to gin this season's crop. During the past 12 months over 100 buildings, distributed all over the city, have been erected at a cost of nearly \$500,000, and still buildings of all kinds are in great demand. The growth of the city may be estimated from the fact that the increase in the school enrollment of 33 1/2 per cent, and in the postal receipts of 30 per cent, has occurred during the past year.

In that part of the gas and oil field which underlies Osage county there are now approximately 1040 oil wells, producing 5,000,000 barrels annually, at a value of \$1,800,000, and 75 gas wells, with over 100 more in contemplation. The wells now in operation are producing over 100,000,000 cubic feet a day. These wells are from 1700 to 2000 feet deep, which is indicative of a long life for the field. One well, sunk to the depth of 2005 feet, tested over 20,000,000 cubic feet daily and over 700 pounds rock pressure. In sinking this well a seven-foot blanket ledge of high-grade semi-anthracite coal was passed through at a depth of 700 feet, showing conclusively that there are rich coal deposits in this section. The city is surrounded on all sides by immense hills of shale, which analysis has shown to be brick and tile-making shale of the highest quality. Raw material for the manufacture of cement and lime is found in and around Pawhuska in abundant quantities and of the finest quality. In the hills surrounding the city there are also rich outcroppings of zinc, lead and silver, indicating large mineral deposits as yet undeveloped. Within easy reach there are large beds of limestone, sandstone and a very fine quality of building stone, together with large deposits of high-grade glass sand easily accessible.

Osage county is a fine grazing county, there being nearly 500,000 head of cattle fattened within its limits annually, and most of these cattle are shipped from Pawhuska. As yet nothing in the nature of scientific dairying has been attempted in the county, but the rich native blue stem pasture which abounds in all this section must be of great value to dairymen. The winters are mild and of short duration, thus obviating the necessity of long periods of home feeding. The shipping facilities are good, and bring her within easy reach of a steady market for dairy products. The county, so wonderfully adapted for the raising of hogs, has never been visited by the dreaded hog cholera. The valleys, rivers and creek bottoms and the sloping stretches of Osage county constitute fertile farm lands. The three staples, cotton, corn and oats, and the forage crops, cowpeas, kaffir corn and maize, may be successfully raised on the same tract of land, thus insuring a full harvest and precluding the possibility of a total crop failure. In the raising of broom corn, Oklahoma has become the banner State of the Union, and Osage claims to be the banner county of Oklahoma. The section is admirably



PIEDMONT PORTLAND CEMENT CO.'S PLANT, ARAGON, GA.

The above illustration shows a general view of plant recently completed in the South by the Piedmont Portland Cement Co. The plant is located on the Seaboard Air Line, near Aragon, Ga., and the company is at present constructing a new town to be known as Portland, Ga., which will have railroad station, telegraph, express and post offices. The initial installation provides for an output of 600 barrels daily, and during the present year this will be increased to 1200 barrels daily. The company owns limestone and shale in practically inexhaustible quantities immediately at the plant. The various buildings include power-plant, 32x125 feet; mill building, 64x90 feet; kiln building, 24x150 feet; coal building, 34x66 feet; stockhouse, 75x100 feet. The plant's equipment was furnished by the following firms: Engines, C. & G. Cooper, Mt. Vernon, Ohio; electrical equipment, Western Electric Co., Chicago, Ill.; Kennedy gyratory rock crusher, Chalmers & Williams, Chicago, Ill.; kilns and dryers, Manitowoc Engineering Works, Manitowoc, Wis.; grinding and pulverizing mills on raw end, coal and finishing ends, Chalmers & Williams, Chicago, Ill. The company's product will be marketed under the trade name of "Piedmont." The officers of the company are: President, J. C. Bass; secretary and treasurer, W. H. Davis; assistant secretary, J. G. Stipe; superintendent, W. S. Davis.

adapted for fruit-raising and gardening. Every fruit, berry and vegetable known to the temperate zone and many found, but seldom north of the torrid, thrive here in abundance. All of these products find a ready market at home or within easy shipping distance.

Immediately adjacent to Pawhuska is an Indian village, in which reside a majority of the tribe. This village is naturally a factor in the prosperity of the city, inasmuch as Uncle Sam pays to Osage \$2,000,000 every year in annuities, oil and gas royalties and rent for farm and grazing land. In addition, the Government expends \$80,000 per annum for maintenance of the Indian Agency and schools. Possibly 90 per cent. of all this amount finds its way into the tills of the merchants and traders of the city. No full blood of the tribe ever goes clad in anything save the blanket, and it is proverbial that no full blood ever performs any manual labor.

F. M. POSEGATE.

#### Two Fine New Steamers.

The Chesapeake Steamship Co. announces that its two new steamers, City of Baltimore and City of Norfolk, will soon be ready for service. The former is, in fact, now on the route between Baltimore, Old Point and Norfolk, having been placed in commission April 12, and the other will take a place on the line April 29. These commodious craft, which are equipped with all the new conveniences, are each 310 feet long and 60 feet wide over all. They are licensed to carry 400 passengers each, and there are 147 state-rooms, ranging in price to suit all travelers. These ships were built, as heretofore noted, by the Maryland Steel Co., Sparrows Point, Md.

#### Looking for Industries.

Board of Trade,

Norton, Va., April 5.

Editor Manufacturers Record:

Beyond question the advantages the South has to offer places this particular section of the country far ahead of any other part of the United States and Canada. From the semi-tropical southern part of Mississippi, where the writer had the pleasure of eating strawberries from the vine in the middle of February, to the mineral section of Southwest Virginia, there can be found every climate adapted to every branch of agricultural and manufacturing industry.

Between these points may be cultivated and grown every farm product that will grow in the United States, from the early truck vegetable to the late winter apple, and as most of the section comprehended in this territory will produce two and in many cases three crops each year, the farming business is growing gigantic in comparison to former proportions, and is making fortunes for a large number of industrious men who are willing to do the work God in his infinite wisdom has put before them. One man marketed over \$3000 worth of farm products on less than eight acres; this alone shows the wonderful possibilities awaiting for anyone willing to devote his strict attention to this means of making a living.

While it is true that every part of the South offers exceptional advantages to every line of industry, there is no section of the South or of the United States holding better opportunities for prospective farmers or manufacturing enterprises than is offered by this section immediately in and surrounding Norton, Va. This place, only claiming about 5000 inhabitants, is

the natural distributing point for 150,000 people which may be reached from one to twelve hours earlier from here than they can be reached from any of the larger cities, markets or distributing point.

Norton is in the very center of Wise county, and as this county has sold \$700,000 good-road bonds, work to commence within 60 or 90 days, this work will do much to increase the traffic of our town; then these roads, when built, will spread out like crow's feet on both the east and west of the town, and it can be truthfully said that "all roads lead to Norton."

It cannot be disputed that a town so situated is a desirable location for a morning newspaper, a wholesale shoe house, a furniture factory and an overall factory. There is a coffin factory here now running overtime for caskets to ship to outside territory, and a mattress factory which cannot nearly fill all orders.

Three trunk line railroads now operate into the town, and several short line roads run to the interior territory, opening up the products of the entire section to every part of the United States. No section of Virginia can be more accessible than is the town of Norton.

The city is progressive, as is shown by the recent authorized bond issue of \$70,000 for street and sewer improvements.

The citizens are liberal-minded and generous, and are willing to offer every encouragement, both moral and financial, to any new business contemplating locating in or near Norton; in fact, the citizens are willing to put a fair proportion of their own money in any of the above-mentioned businesses or any other business that may have a fair chance for success.

The Norton Board of Trade invites correspondence. S. H. WALTHALL,  
Secretary.

#### Building at Longview.

Chamber of Commerce,

Longview, Tex., April 8.

Editor Manufacturers Record:

The First National Bank recently let the contract to Prof. S. J. Blocker for the erection of a modern bank building, four stories. Work was begun on the first of the month.

The contract for the erection of a modern Masonic Temple to cost \$10,000 was awarded Dick Fuqua, and work is now in progress.

W. F. Nelson recently purchased a tract of ground on the south side of the courthouse square, and is having plans and specifications drawn for a modern two-story brick wholesale house. He expects to have the building under way inside of the next 30 days.

The County Commissioners' Court has awarded the contract for the construction of concrete sidewalks and curbing around the courthouse square to C. B. Brumback & Co. The walk is to be five feet wide and the curbing 18 inches high. It will take approximately \$2000 to complete the job.

Local financiers are sinking a well three miles south of the city for oil, and every indication so far points toward success.

At a recent meeting of the City Council a franchise was granted J. C. Turner, Sr., and others for an electric car line in this city, work to begin during the next 60 days.

This city is taking on a phenomenal growth, and prospectors and homeseekers are arriving daily.

LUTHER ELLISON, Secretary.

#### For a Match Factory.

Wide-Awake Club,

Wadesboro, N. C., April 7.

Editor Manufacturers Record:

We believe that Wadesboro is the place for a match factory.

L. J. HUNTLEY, Secretary.



## Economic Importance of the Farm Tractor.

In a paper presented this week before the American Society of Mechanical Engineers, New York, by Mr. L. W. Ellis, traction plowing specialist of the M. Rumely Company of La Porte, Ind., on the economic importance of the farm tractor, inspiring suggestions were made that are likely to be influential in hastening the full day of machinery on the farm. The inventive spirit is becoming more and more directed into that field, spurred by the increasing demands of non-productive population upon farm production and encouraged by the results of investigations by agricultural science. The paper is deemed of such far-reaching importance to the farmer, the manufacturer and the

temporaries in the arts and commerce. But with animal power, even on the large farm, there has been little possible variation in methods and equipment from those of the small one. The possible manipulation of animal power by a single laborer quickly reaches its limit. Thereafter the increase in size of the farm is attended by increasing complexity of organization, involving more labor, deputized management, and usually a decrease in efficiency as compared with the smaller holding.

"With our present rural organization we are pressing on the limits of agricultural production. We are no longer exporting vast quantities of breadstuffs. We are earnestly considering the question of

now generally practiced consumes 60 per cent. of the total power expended in raising and harvesting the wheat crop, even on old land. Deeper plowing to secure maximum yields sharpens the necessity for power in the brief plowing season. The slow process of animal reproduction cannot respond quickly enough, and the price of horses has increased 143 per cent. in 10 years in spite of a 50 per cent. increase in the supply. Today in Canada, where great added power is imperative, horses can be purchased only in limited numbers. Even the United States Department of Agriculture cannot find an adequate supply of brood mares for the future needs of the New South. Increased production cannot safely depend on animal power.

"Nor is production the only consideration. Fifteen million work animals, and

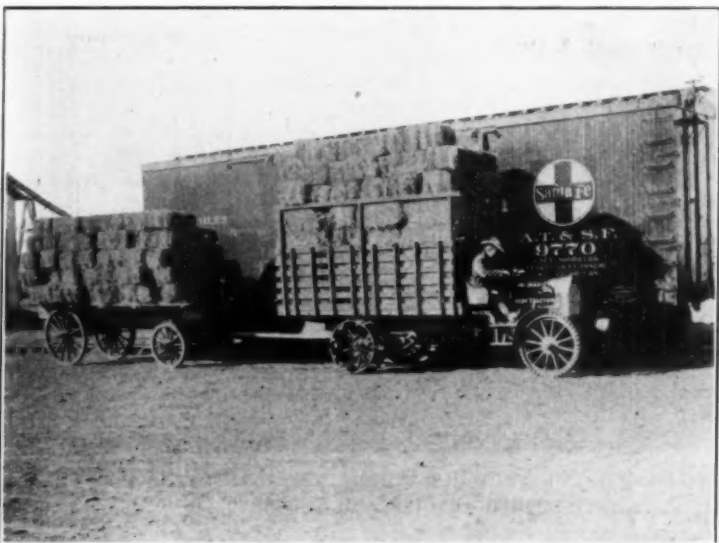
more easily, and other animals can be kept which will produce human food instead of power, and return to the soil manure of even greater fertilizing value.

"For a quarter of a century mechanical power has taken the place of animal labor for operating stationary machinery on the farm. The small stationary gasoline engine of the last decade has relieved both man and horse of a host of minor duties. The automobile on many a farm has assumed the place of the light roadster and restricted the draft horse to the heavy work of the field. The farm field is the last and greatest stronghold of the horse, and the most difficult place for the substitution of mechanical power. But now, for large units at least, the farm tractor has become a fixture.

"The farm tractor is the solution of the



STEAM TRACTOR OF M. RUMELY COMPANY, LA PORTE, IND., PULLING TWELVE PLOWS, DISCS AND PACKER.



HAULING HAY FROM FARM TO DEPOT BY TRACTOR MADE BY AVERY COMPANY, PEORIA, ILL.



TAKING THE HARVEST TO MARKET BY TRACTOR MADE BY OHIO TRACTOR MANUFACTURING CO., MARION, O.



PLOWING RECLAIMED TULE LAND WITH TRACTOR OF HOLT CATERPILLAR CO., PEORIA, ILL.

inventor that a large portion of it is reproduced in these pages, and with it are published a number of illustrations of the divers uses of farm tractors, really closely allied to motor trucks which have become such mighty factors in commerce. In his paper Mr. Ellis said in part:

"Now, as in the beginning, the human race uses power for three great fundamental occupations: Tilling the soil to produce materials; changing the shape of materials to adapt them for use, and carrying either the raw or manufactured product from place to place. In other words, power is required for agriculture, manufacturing and transportation.

"Of these, agriculture, man's fundamental occupation, is the last to feel the need of mechanical power. In adapting animal power to human needs, the tiller of the soil has in all ages surpassed his con-

what we must do to be fed, and the problem of farm power overshadows all other factors involved in obtaining the answer. To provide permanently a sufficient supply of food, teachings of agricultural scientists must be universally heeded. Better seed, deeper plowing, more thorough tillage must lay the foundation for greater yields from each acre. Waste places must be reclaimed, our whole productive area developed and occupied. But our present needs are enormous, increasing more swiftly than these ideals can be realized. Greater areas must be brought immediately into productiveness and they must maintain maximum yields indefinitely, if production is to keep pace with demand.

"The lack of power for plowing and harvesting is the tremendous obstacle to the sudden expansion into virgin fields of our productive area. The shallow plowing

the 10,000,000 more to keep up the supply, scarcely develop sufficient power for present farm purposes. Their feed alone costs \$1,250,000,000 per year, equaling the total income of 2,000,000 average families. Thus the crops from one acre in five are withheld from supplying human needs by the use of animals for farm power.

"Cheap mechanical power on the farm can be made to combine the intensive culture of the small farm, well tilled, with the economical production of the large farm, well managed. It is already doing so on the immense sugar-beet ranches of California, where 10,000 acres of beets may be handled by a single management with specially-designed engines and machinery.

"Mechanical power need not impair fertility, as leguminous crops, gathering nitrogen from the air, can be plowed under

immediate problem. Of all the sources of power, it fits most easily into the present scheme of things. Excepting the thresher and the engine gang plows, we have no field implements or machinery especially adapted to the use of mechanical power. The prime mover which shall take the place of the horse must therefore be capable of drawing implements designed for utilizing the horse's power, at least until other means of applying power to the soil shall have been developed.

"The farm tractor does not age or deteriorate when idle, and requires neither fuel nor attendance when not at work. The time spent annually in caring for a horse will keep the tractor in perfect working condition. It will endure heavy work 24 hours a day instead of 6, and outlive the average work animal in hours of service. It occupies less floor space than two

wagons, and with a year's fuel supply may be sheltered in a building a tenth the size and cost required to house and maintain horses of equal power.

"Efficient farm labor grows increasingly scarce. The tractor concentrates in one man's hands the power of 25 horses and the endurance of 100, and adds twofold to the acres he can cultivate. By condensing crop operations within the period when the most favorable conditions prevail, it adds to the quantity and quality of the product. Every horse displaced by this new power saves five to eight more of these acres for human maintenance, for the mechanical motor consumes nothing which could be converted into food for mankind.

"The history of the average farm machine covers a period of cutting and trying, of successive increase and decrease of

year, and a life of 500 working hours is probably above the average. High cost then, is not justified, and the American farmer likes to buy on price.

"A mechanical engineer connected with the manufacture of farm engines once expressed his contempt for the self-binding harvester as a machine, and his admiration for the men who developed it. Said he: 'Given the same problem, with his data on stresses and strains, his factor of safety, and his highly trained caution, the mechanical engineer would have produced a binder which would work and wear forever, but which would be so heavy and cost so much that a practical farmer would never hitch a team to it.'

"The character of the machinery man utilizes is determined largely by the type of power available for operating it. On

farm and for light work on the large one where a greater power unit is also employed.

"Just now there is the type of tractor, which must be fixed; the best number of cylinders, speed of engine, tractive speed, size of drivers and distribution of weight; the kind and quality of materials and the best methods of construction. There is particularly the adoption of a practicable standard for rating tractors, the use of which would be of the greatest value to the non-technical purchaser.

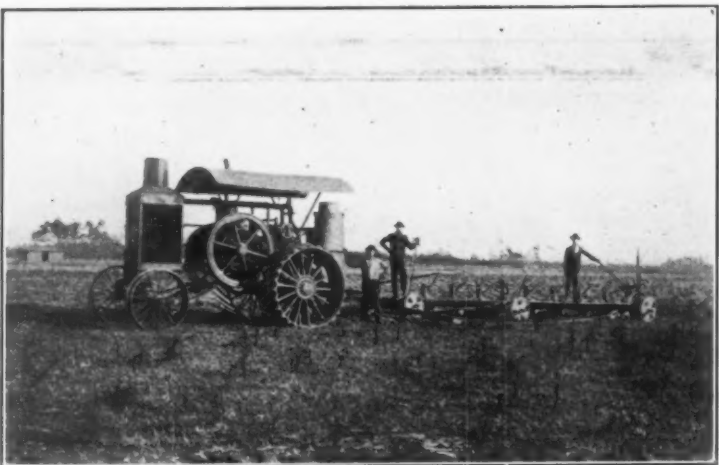
"The present offerings afford an ample basis on which to work out the final solution. Besides the wide variety of direct tractors, we have the cable-drawn implement with power stationary; the self-propelling machine, securing traction by grip on a cable instead of the soil; the machine with traction and working parts separate.

movement in agriculture. The ultimate type of farm power will undoubtedly depend upon the acreage required to supply it with fuel, owing to the rapidly-growing needs of the human race. The horse is capable of little further improvement in economy; the actual refinement of the tractor has scarcely begun. Here are problems for the engineer, the chemist and the agriculturist. The three, working hand-in-hand, can set forever at rest the question of our interdependent food and power supplies.

"The commercial efficiency of the present tractors is based largely on local conditions, such as the price of fuel, the accessibility and quality of water, cost of labor, topography, type of farming and volume of work. It is greatest in sections where they may be used for general farm work. This, for the larger and more com-



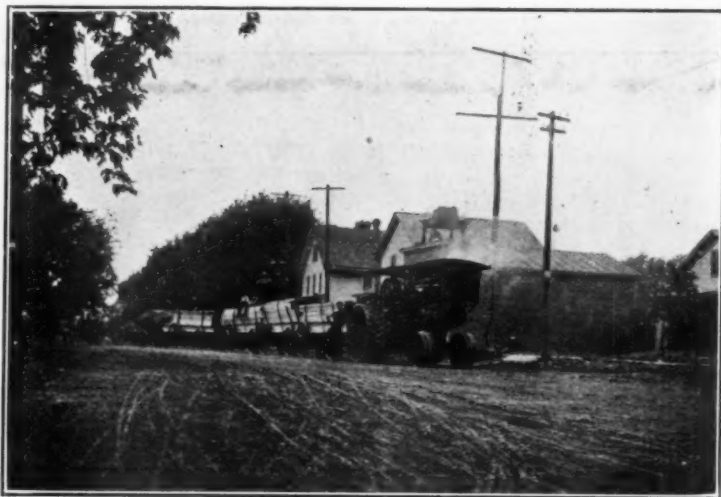
PLOWING WITH TRACTOR OF HUBER MANUFACTURING CO. OF MARION, O.



GASOLINE-KEROSENE TRACTOR OF HART-PARR COMPANY, CHARLES CITY, IA., ON LAND OF SOUTHERN ORCHARDS CO. OF MOBILE.



OPERATING CULTIVATOR OF THE MCKINNEY TRACTION CULTIVATOR CO., GAINESVILLE, GA.



LUMBER FOR THE FARM HAULED BY TRACTOR OF THE PORT HURON (MICH.) ENGINE AND THRESHER CO.

the size of parts, of change of this and that, until every part is as strong and as light as the next. The great difference between the average farm machine and the celebrated 'one-hoss shay' is that the latter was built to last for a century, while the former is built, first, to conserve power; second, to be sold at a low cost; and, finally, to last as long as it will. To meet the requirements of the situation inventive genius, patience and perseverance have been needed, rather than high technical ability. Perhaps the latter was more than once tried and found wanting. Suffice it to say that McCormick, Deere and other great creative spirits were of the so-called practical type.

"Machines of small capacity have had to be created for a hundred tasks formerly performed by hand. So frequent were improvements that until recently the durable machine might become obsolete before yielding a profitable return. The average field machine is in use but a few days each

the farm, where the power needs are varied in the extreme, where during seed time and harvest an enormous peak-load must be carried economically, the prevailing power has been one which required food, water and shelter, attendance and exercise 365 days in the year, a power which must be kept in constant readiness nearly 9000 hours for less than 1000 of service. The available power installation on the average farm has been, therefore, a compromise between the amount required properly to do the work in two seasons of the year and the excessive maintenance charge imposed during the off seasons. To reduce the peak-load has been the great problem; hence efficiency and durability of farm machines have only too often been sacrificed to the absolute necessity of light draft."

"Centralization of farms and the shaping of farm processes to less extreme power requirements will take place slowly. There is, therefore, the problem of the small tractor, both for universal use on the small

the former operated by either animal or mechanical power, and the latter of rotary type, driven by mechanical power exclusively. The ultimate need is for a durable, self-contained plant, so light as neither to waste power in moving it, nor to compress the ground in passing over it, capable of performing every operation from driving a stationary machine to plowing, pulverizing, seeding, cultivating, harvesting and hauling the crop. It must be low in cost, both initial and operative, economical of labor and repairs, and capable of utilizing economically whatever fuel may be most abundant and easily procurable.

"The success of mechanical power on the farm depends largely on an adequate supply of cheap fuel. The recent development of a successful oil-burning tractor using the heavier, cheaper and more abundant grades of kerosene is a distinct achievement, a feat of tremendous importance in the advancement of this great

mon types, implies large tracts of land, and, of course, the lowest possible grades. The distribution of work on small grain farms favors the use of the tractor rather than the horse.

"The cheapness with which the tractor breaks up virgin land and the simplicity of maintenance during idleness make for its use in the newer districts. The rapidity with which these sections are being settled is due quite as much to the use of mechanical power for plowing as to the extension of railway facilities.

"In the colder climates, where all crop operations must be rushed, and in climates where heavy work must be done under conditions of extreme heat the tractor naturally excels the animal. On the other hand, where work may be extended over long periods, and where corn, cotton and other intertilled crops require the use of a small power unit for cultivation, the lack of a small, flexible tractor favors the use of the animal. Even in these sections,

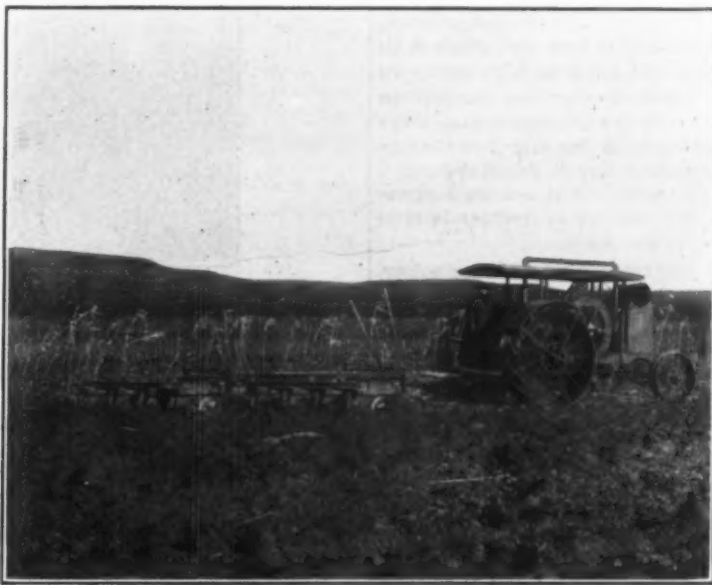




PLOWING SCENE AT LANGDON, ALBERTA: WITH TRACTOR OF THE J. I. CASE THRESHING MACHINE CO. OF RACINE, WIS.



PLOWING OUTFIT OF REEVES & CO. OF COLUMBUS, IND., IN OPERATION.



INTERNATIONAL HARVESTER CO. TRACTOR PULLING EIGHT BOTTOM PLOW.

however, the experiment station authorities unanimously maintain that depth of plowing and larger yields are commonly sacrificed because of a lack of power.

"Three years ago, in a bulletin on traction plowing prepared for the Department of Agriculture, I stated that, taken as a whole, traction plowing could hardly be said to be cheaper than horse plowing, especially if gang plows were drawn by the horses. This was based on the observation that many operators used their engines only for plowing and threshing, and the assumption that the average life of an engine would be about seven years. Both conditions are constantly being modified to reduce the overhead charges. Tractors are now used for plowing, discing, seeding, harrowing, summer fallowing, back-setting, harvesting, threshing and hauling, besides such jobs as running clover hullers, huskers and shredders, sawmills and the like. The volume of work provided becomes much greater as the tractioner learns the possibilities of his outfit, and nearly every outfit now does some custom work.

"Moreover, improvement in durability and efficiency of both steam and internal-combustion tractors has been great, even in the short interval, and the compact engine-gang plows, now commonly used, are models of convenience as compared with the wide variety of types only recently employed. These quick changes have been forced upon manufacturers by the universal demand for better equipment for plowing. Schools of traction engineering, too, have aided much by increasing the efficiency of operators. Even if the earlier statement were still true, the question of cost is often a minor item, the net returns



BUFFALO PITTS COMPANY ROLLER ADAPTED TO THRESHING.

from a crop being dependent on the ability to perform necessary operations with a minimum of time. The capacity and endurance of the traction engine outweigh all other considerations in a crisis.

"At Western points distant from the refineries and close to coal fields and good water supply, steam engines may have the advantage of the internal-combustion type. In the nearer West the latter have come into use with a swiftness that is amazing when one considers that the first one to prove successful was launched only about eight years ago. Their economy in small sizes, their convenience, safety around buildings, and the fact that operators are not usually required to hold licenses commend them strongly. Wonderful tank wagon service now brings fuel for the oil-burning engine direct to the farm at wholesale prices, an engine often yielding as great a profit to the refiner as a town of 600 inhabitants.

"The internal-combustion engine is eco-

nomical of labor as compared with either steam or animal power. In plowing, for instance, two men, with only occasional attendance by horses, are required for both engine and plows. For steam-plowing outfits I found an average of 6 men and 5.5 horses in California; 3.4 men and 3.1 horses in the Southwestern States, and 4.2 men and 4.5 horses in the Northwest. The engineer and plowman should be of the same caliber in either case, but the extra labor and board involved in operating the steam tractor is a serious handicap on small outfits. The capacity of the steam engines, which, as a rule, are the larger, their fuel economy in some sections, and the fact that as a class they have been more reliable, have tended to equalize matters. The initial cost per horse-power is much less for steam than for internal-combustion tractors, but a somewhat greater outlay must be made in providing for the transportation of coal and water, and for the comfort of horses and extra men."

Mr. Ellis discussed at some detail coal and water consumption and gasoline consumption by tractors, thermal and traction efficiency and the daily capacity of tractors, and said:

"Comparisons of cost of operation are usually unsatisfactory, owing to the dominating effect of local conditions and the personal element. Anywhere from 5 to 20 horse-power hour may be needed to plow an acre. Ordinary loam shows a resistance of from  $4\frac{1}{2}$  to  $5\frac{1}{2}$  pounds per square inch of cross-section of the furrow slice, say 300 pounds for a furrow 6x12 inches. In plowing an acre of this soil, the 12-inch plow will travel 43,560 feet and require 7.9 horse-power hour of work, in addition to the turns, etc. At Winnipeg it required from 12 to 19 horse-power hour to the acre, plowed 4 inches deep. The transportation of supplies is a highly variable factor. In fact, all factors are, and after trying for two years to secure dependable averages, I was forced to generalize in a report dealing with the situation.

"The manager of a noted Dakota farm this year puts the cost of producing an acre of wheat with horses at \$8.45. A traction farmer in the same State produced a 200-acre crop of flax last year for \$6.50 per acre, allowing for all overhead charges. Roughly speaking, the tractor cuts 10 cents from the cost of producing a bushel of wheat in a 20-bushel crop. The table summarizes the comparative cost of production with horses and an oil-burning tractor for conditions in Eastern North Dakota. Overhead charges on prime mover are included in the several costs of operations. Machinery costs for the tractors are a

trifle higher because of the added investment in suitable plows:

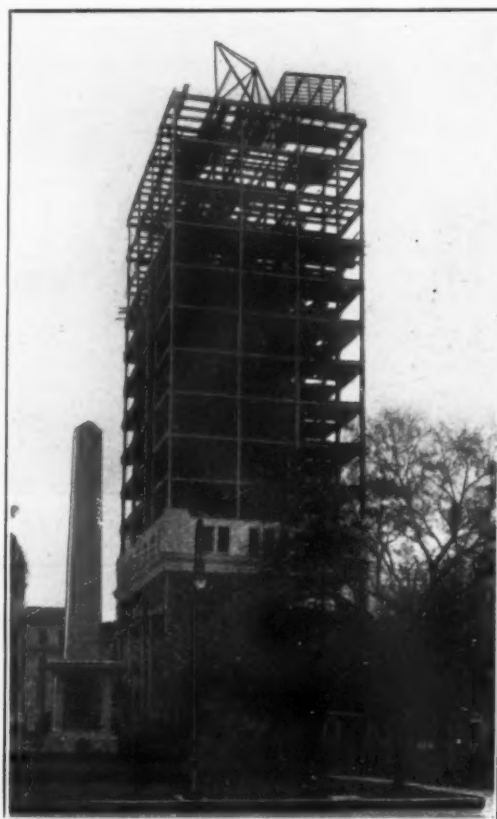
*Comparative Cost of Production.*

	Cost of production per acre of wheat. With horses.	With tractor.
Land rental.....	\$2 00	\$2 00
Plowing.....	1 35	76
Seed.....	1 13	1 13
Pulverizing and seeding.....	63	17
Twine and cutting.....	75	39
Shocking.....	22	22
Threshing.....	65	65
Machinery costs.....	62	67
Hauling.....	1 00	26
Incidentals.....	30	30
Total.....	\$8 65	\$6 55

"The cost of keeping animals is increasing. The scarcity of lumber is making buildings for shelter more costly. Labor is higher in price, as is horse feed. The average farm horse gets 10 pounds of food (6½ pounds of hay and 3½ pounds of grain) for every hour he works, and some pasturage beside. His thermal efficiency is around 6 per cent. when worked 10 hours a day and skilfully fed, but ordinarily only around 1 to 2 per cent. Much of his work is light, and he probably returns not over 500 horse-power hour per year for the \$100 which it takes to keep him. Other advantages than cost have given the tractor preference over the animal to date, but as the transition continues the comparative cost will vary increasingly in favor of mechanical power.

"I have indulged in not a little prophecy, yet current events seem to indicate that it is not all idle. Mechanical power has come to the farm and displaced the animal in countless instances. The old-time bonanza farms have largely been broken up into small holdings, on which the personal interest of the home-loving owner has proved more effective than the long-range management of the wheat baron. But a new type of large farm, owned by the stock company, managed by a scientifically-trained business farmer, and operated largely by mechanical power, is multiplying in the West. Men of means, for pleasure, perhaps, but also for experience and profit, are dabbling in farm ownership. The farm has been subjected to analysis by the soil expert, the chemist, the botanist and pathologist, the plant and animal breeder, the economist, and, finally, by the business doctor. Now, for the first time, it is being analyzed as an engineering proposition, for after all these authorities have laid down the plan, the execution of it is largely an engineering problem. Thoughtful, far-sighted men have seen that the farm of the future will be one on which the efficiency of the equipment will largely measure the success of the enterprise. Four-year courses in agricultural engineering are already graduating men with a knowledge of civil, electrical, hydraulic, and, most of all, mechanical engineering. The agricultural engineer must know something of all these branches, and more. He must know the problems of the farm; in short, must be an alert, well-equipped, all-around man. But his opportunity will be well worth the necessary training. He will install machinery, erect buildings, plan the water supply, irrigate or drain, as the case may be, superintend the maintenance and perhaps the operation of all equipment. His life will be in the open, with all the conveniences and opportunities for mental development that the modern farm will afford. His will be an honored profession, his career a constant stimulus to breadth of vision and intellect."

With the retirement under the pension system on July 1 of Capt. J. F. Merry, general immigration agent of the Illinois Central Railroad, the merged industrial and immigration department of the system will be under the supervision of Mr. J. C. Clair, with headquarters at Chicago.



SAVANNAH BANK & TRUST CO. BUILDING AT SAVANNAH.

Photographic view showing progress on construction; contract awarded November 11, 1910; building 60x92½ feet; 15 stories high; fireproof construction; cost, without mechanical equipment, about \$300,000; steam-heating equipment (including two low-pressure boilers) costing \$9000; electric lighting; electric elevator (600 feet per minute) and equipment costing \$30,000; burglar-proof vaults; architects, Mowbray & Uffinger of New York; contractor, Charles McCaul Company of Philadelphia.

#### SOUTHERN ENERGY IMPRESSES.

**A German Engineer on Hydro-Electric Developments.**

[Special Cor. Manufacturers Record.]

Charlotte, N. C., April 7.

It is to be remarked that the hydro-electric developments of the South are attracting the attention of engineers of foreign countries on account of the advanced ideas of its high voltage development. Mr. Georg N. Reinhart, an electrical engineer of Frankfort-on-Main, Germany, is now making a tour of the country in the interest of his profession, and after a visit to some of the plants of the Southern Power Co. expressed the opinion that the operations of this company were not surpassed by any other plants he had seen.

The immensity of the Southern Power Co.'s development appealed to him as being wonderful, especially so, as to his mind he considered this settled in comparison with the sections of the Old Country where such enterprises would be undertaken.

He was also amazed that a company should spend such a large sum of money in the building of an interurban electric railway where the larger towns and cities were so situated as in the western part of the Carolinas, and run through a more or less developed farming community, and commented upon the great foresight of the American business man in making developments a forerunner of increased population and industry. Mr. Reinhart is a man of broad education, and was fully able to appreciate that such developments as these meant great things for the section of the country in which they were being undertaken, and could see a bright future for the industrial developments of the South.

J. LOUIS SPENCER.

The Louisiana Development League will offer a prize of \$1000 for the best 12 ears of corn exhibited at the land show to be held in Chicago in November.

#### SCHELL IRRIGATION PLANT.

**Opening of the First Unit in the Great Louisiana Project.**

In the presence of a large assemblage of many parts of Louisiana, and including a party of nearly 100 persons from Pennsylvania, the first unit in the plant of the Union Irrigation Co. at Washington, La., went into operation last Saturday. Addresses were made by Governor Jared Y. Sanders of Louisiana, Mr. John W. Lewis of Opelousas, Mr. Joseph Richter of Pennsylvania and others appreciative of the great undertaking, which is essentially an expression of the optimistic perseverance of Mr. J. Franklin Schell of Pennsylvania in the face of many difficulties.

The first unit of the plant is expected to care for a canal five miles long, with eight miles of laterals, to irrigate at least 15,000 acres of land, but when completed the main canal will be 30 miles long, and with the laterals will be able to irrigate 1,000,000 acres in two or three parishes.

#### For Southern Growth.

For the encouragement of live-stock raising in agricultural communities along its lines, the Southern Railway Co. will appoint Mr. F. L. Word as live-stock agent to devote his entire time to the dissemination of information about the raising, shipping and marketing live-stock and to the development of the business of cattle shipments into localities along the lines where cattle may be most advantageously fed for the market.

The Southern Railway Co., in its report to the Interstate Commerce Commission for the year ended June 30, 1910, shows that that company expended for the work of its land and industrial department in co-operation with communities, commercial organizations and individuals along its lines a total of \$59,451.

Since the end of the last fiscal year, the period covered by these statistics, the

Southern Railway Co. has considerably enlarged the work of its land and industrial department, and has supplemented it by the organization of a cotton culture department, devoted exclusively to co-operating with the United States Agricultural Department and the agricultural commissioners of the States in efforts to bring about a larger average yield of cotton per acre and to advise the farmers as to the best methods of growing cotton, in spite of the Mexican cotton boll-weevil in localities where that insect is present.

Mr. W. C. Olds has been appointed traveling industrial agent of that system, with headquarters at Washington, D. C. He will work for the establishment of industrial plants along the lines of the system.

#### Interstate Cottonseed Crushers.

President B. F. Taylor of the Interstate Cottonseed Crushers' Association, in issuing his call for the annual convention of that body, to meet in New York June 7-9, says to the members:

"We have had so many splendid meetings in the past, each succeeding one, naturally, as the association has grown in members and in importance, surpassing its predecessors in business value, and each vying with all the others in social enjoyment, that comparisons would be odious. But, even since the glorious success that crowned the last, the association has grown mightily in every way. The season just closed has developed many new and hitherto untried phases in trading and in conditions, and our rules and customs must be readjusted to meet them. This means work—serious work—in which you are materially and directly interested, and concerning which the association needs your counsel and advice, while, in order that the adjustment may be properly made, you should be present and share in it. It is your business; your interest is at stake, and nobody, however fairly disposed, is going to care for it as you would yourself."

#### Improvements at Memphis.

A. D. Gibson & Sons of Memphis, Tenn., write to the MANUFACTURERS RECORD:

"In this particular locality the building trade, more especially for residential construction, is unusually busy. Our particular line of business brings us closely in touch with all new buildings, and the percentage of construction during the present year is far beyond that of any business period. We have just appointed a most handsome suite of apartments, which will be occupied by the Chickasaw Guards Club of this city, in the new 19-story Exchange Building, just completed.

"Our new Country Club is now under construction, and will include all modern features that might be found in clubs more pretentious.

"Our new union railroad station, now under construction, is a stone building, which would be considered a credit to any metropolitan town."

The last quarterly report of the West Virginia State Board of Agriculture publishes the record of the proceedings of the last annual meeting of the State Horticultural Society.

The sale of 4000 acres of land in Crittenden county, Arkansas, opposite Memphis, Tenn., is reported to be the first step in a plan to establish on the land German and Italian truck growers.

Forty-two car shops in Missouri turned out in 1909 finished products and repair work to the value of \$23,071,000, and foundry and machine shop to the value of \$22,022,000.



## The Proposed Merger of Alabama Iron Properties.

Last week the MANUFACTURERS RECORD mentioned that the Alabama Consolidated Coal, Iron & Steel Co. had been chartered under the laws of New Jersey to carry out the proposed Alabama Consolidated Coal & Iron Co. and Southern Iron & Steel Co. merger. Since then a committee has been appointed to work out details for the merger either by direct ownership or through the purchase of a controlling interest in the stock as the committee may deem best. The capital stock is to be \$10,000,000 of preferred and \$20,000,000 of common. The committee appointed consists of the following: Cecil A. Greenfield of Bourke-Schiff & Co. of London, representing the Southern Iron & Steel Co.; Alexander J. Hemphill, vice-president of the Guaranty Trust Co., New York; Charles Hayden of Hayden, Stone & Co., Boston; Benjamin Strong, Jr., of the Bankers' Trust Co., New York, and Henry H. Melville of Montreal. If a combination merger of these companies can be effected on a satisfactory basis, it ought to result in the development of a very strong company for making iron and steel and the building of a railroad which would, in the opinion of railroad experts, be of immense value to the Alabama mineral district. These two companies are so closely allied in the ownership of properties that a merger of the two, with new capital for larger development work, and possibly the rounding out of the enterprise by the purchase of strategic bodies of iron ore, safeguarding all the future, would create an enterprise which, under good management, could be made one of the really great iron and steel concerns of the United States.

### Steel Rail Orders.

[Special Dispatch to Manufacturers Record.]

New York, April 12.

The initial steel rail orders placed for the Harriman lines, aggregating 72,000 tons, are distributed as follows: Illinois Steel Co., 21,225 tons Bessemer, and Tennessee Coal, Iron & Railroad Co., 18,000 tons of open-hearth. It is understood that the remaining 33,000-ton order will go to the Colorado Fuel & Iron Co. Other orders of the past week include 500 tons for New Orleans Railway & Light Co. to Carnegie Steel Co.; 1000 tons for Richmond, Fredericksburg & Potomac Railroad to Maryland Steel Co.; 735 tons for Galveston, Houston & Henderson Railroad to Tennessee Coal, Iron & Railroad Co., which also has orders for 700 tons miscellaneous.

### For Kentucky.

Judge B. A. Fuson of Bell county, Kentucky; Mayor E. S. Helburn of Middleboro, and Mayor N. R. Patterson of Pineville have united in an invitation to a meeting at Pineville, Ky., on April 19-20 for the purpose of effecting a permanent organization looking to the building and maintaining of a system of highways in Southeastern Kentucky.

The counties of Wise and Lee, Virginia, and the counties of Claiborne and Campbell in Tennessee have procured funds and completed arrangements for the extensive building of highways through those counties. In order to keep pace with this great progressive movement and to connect these sections of neighboring States with the central and northern portions of Kentucky, a highway running through from the Virginia and Tennessee lines to Central Kentucky is especially needed in order to connect with the roads being constructed south of the Kentucky line.

## GOOD ROADS

### WEEK'S HIGHWAY RECORD.

#### Progress in Southern Road and Street Improvement.

[Full details of highway undertakings are given in the Construction Department.]

#### Bonds Voted.

Americus, Ga.—City voted \$105,000 of bonds for street paving, water-works improvements and sewer extensions.

Highland Park, Va.—City voted \$50,000 of bonds for street and sidewalk improvements, water system and street lights.

Luling, Tex.—Caldwell County Road Precinct No. 2 voted to issue \$50,000 of bonds for road construction.

Maryville, Tenn.—Blount county voted \$300,000 bond issue for additional road construction.

Shreveport, La.—City voted \$250,000 of bonds for street improvements.

#### Bonds to Be Voted.

Baltimore, Md.—City will vote May 2 on \$5,000,000 paving loan.

Hamlet, N. C.—City will vote May 2 on issuing \$5000 of bonds for street improvements.

Sedalia, Mo.—Pettis county votes May 16 on issuing \$40,000 of bonds to construct rock roads.

#### Contracts Awarded.

Dallas, Tex.—City awarded contract at about \$137,000 for bitulithic paving; at about \$70,000 for wood-block paving.

Dallas, Tex.—City awarded contract at about \$27,000 for bitulithic and creosoted wood-block paving.

Franklinton, La.—Washington parish awarded contract for one mile of road.

Houma, La.—City awarded contract for constructing cement sidewalks on three streets.

Jasper, Fla.—Hamilton county awarded contract to construct 35 miles of road.

Longview, Tex.—Gregg county awarded contract for concrete sidewalks and curbing around courthouse; cost about \$200,000.

Meridian, Miss.—Lauderdale county awarded contract for constructing four-mile section of roads.

Portsmouth, Va.—City awarded contract at about \$14,000 for grading, block paving, granite curbing and macadam roadway.

Sedalia, Ala.—Russell county awarded contract for grading road to Girard; additional roads to be graded; \$100,000 of bonds issued.

#### Contracts to Be Awarded.

Abingdon, Va.—City will expend \$12,000 and county will expend \$36,000 for grading and macadamizing roads.

Aiken, S. C.—Aiken-Augusta Public Highway Association organized to construct road to Augusta, Ga.; sand-clay construction costing about \$7000.

Baton Rouge, La.—State Highway Department opens bids April 26 for constructing 32 miles of road.

Columbus, Miss.—City receives bids until May 2 for constructing 6000 linear feet of concrete curb and gutter or granite curb and concrete gutter.

Decatur, Ala.—City receives bids until April 18 for constructing cement sidewalks, cement curbs and brick crosswalks.

Jacksonville, Fla.—City receives bids until May 3 for resurfacing 1½ miles of asphalt macadam.

Linnville, N. C.—Appalachian Highway Co. organized with \$300,000 capital stock to build 90-mile road.

Mt. Sterling, Ky.—City will construct 12 yards of vitrified brick paving on concrete base.

New Decatur, Ala.—City receives bids

until April 19 for constructing cement sidewalks.

Oklahoma City Okla.—City receives bids until April 18 for grading and asphaltic concrete paving on various avenues.

Pensacola, Fla.—City will construct 14 blocks of hard roads.

Polytechnic, Tex.—City contemplates grading streets and paving additional sidewalks.

Portsmouth, Va.—Norfolk county receives bids until April 17 for constructing macadam road.

Portsmouth, Va.—City receives bids until April 19 for grading, vitrified-brick paving, bituminous macadam, etc.

Richmond, Va.—Southeastern Virginia Road Association organized to construct 87 miles of road from Richmond to Carolina line via Petersburg.

San Antonio, Tex.—Bexar county receives bids until April 20 for grading road.

Shreveport, La.—City opened bids on April 11 for concrete curbing and sidewalks.

Tuscaloosa, Ala.—City will ask bids on constructing 4155 square yards of concrete sidewalks, 8339 linear feet of concrete curb and 4465 linear feet of combined curb and gutter.

Washington, D. C.—Engineer of Highways completed plans for laying asphalt and asphalt block on unpaved streets; \$79,500 appropriated.

Washington, D. C.—District Commissioners receive bids until April 22 for curbing asphalt pavements.

Waynesville, Tenn.—Southern Assembly will construct five miles of boulevard and five miles of roads.

Wharton, Tex.—City will construct sidewalks costing \$15,000.

### Good Roads Congress.

Mr. J. A. Rountree, secretary of the Alabama Good Roads Association, who is also secretary of the congress on good roads to be held at Birmingham May 23-26, informs the MANUFACTURERS RECORD that 9 Governors, 12 Senators and Representatives in Congress, 12 commissioners of agriculture, 10 State geologists, 5 commissioners of immigration, railroad officials and others have promised to make addresses at the Congress. The interest of Alabama in the meeting is evidenced in the fact that among those who united in the call for it are United States Senators John H. Bankhead and Joseph F. Johnston, Governor Emmet O'Neal, Lieutenant-Governor Walter D. Seed, president pro tem. of the State Senate; Hugh Morrow, Speaker E. B. Altom of the House of Representatives, Secretary of State Cyrus B. Brown, State Treasurer John Purifoy, State Auditor C. B. Smith, Commissioner of Agriculture R. F. Kolb, Superintendent of Education Henry J. Willingham, Attorney-General Robert C. Brickell, Commissioner of Immigration Lee Cowart, Railroad Commissioners Frank N. Julian and Leon McCord, Mayor Culppepper Exum of Birmingham, Job Going, president of the Jefferson county board of revenue; John Craft, president, and W. M. Drennen, vice-president, Alabama Good Roads Association; John W. O'Neil, president, and Frank Y. Anderson, vice-president, Jefferson County Good Roads Association; President R. W. Massey, Chamber of Commerce; President B. H. Cooper, Board of Trade; President J. H. Holcombe, Business Men's League; President J. E. Dedman and Secretary G. T. Brazelton of the Motor Club, and President John L. Parker, Board of Education, Birmingham.

The Retail Hardware Dealers' Association of Georgia will meet at Macon May 23-25.

## RAILROADS

[A complete record of all new railroad building in the South will be found in the Construction Department.]

### ANOTHER COAL ROAD.

Chesapeake & Ohio to Build New Line in Kentucky and Virginia.

Still another railroad company has been incorporated with the object of developing coal lands in the eastern part of Kentucky, although it will also penetrate a rich mineral region in the southwestern part of Virginia. It is the Levisa River Railroad Co., and the incorporators are all, or nearly all, officers of the Chesapeake & Ohio Railway. The line is to branch off from the Big Sandy division of the Chesapeake & Ohio at Ward Station, in Pike county, Kentucky, and, as its name indicates, will follow the Levisa Fork, crossing into Buchanan county, Virginia, and thence to Grundy, the county seat. According to this the line will cross the mountains seven or eight miles north of the Russell Fork at the Breaks of the Big Sandy, through which gap it has long been proposed to make a connection between the Chesapeake & Ohio and the Clinchfield roads. There is no railroad at present in Buchanan county, and the newcomer will open up an entirely new territory for traffic. It will be 30 or 40 miles long.

It is said that construction of the proposed new road will begin in a few days, although this statement is made in connection with the publication of the filing of incorporation articles at Frankfort, Ky., and cannot be regarded as official, although the fact that prominent officials of the C. & O. are interested indicates that active work is likely to begin without delay. They are G. B. Wall, assistant to President Stevens; Decatur Axtell, first vice-president; E. W. Grice, general manager; A. Trevett, assistant secretary, all of Richmond, Va.; J. A. Fox, division superintendent, Ashland, Ky.; Lee Wright Browning, Maysville, Ky., and F. T. D. Wallace of Louisa, Ky. Headquarters will be at Ashland.

The capital stock of the company will be \$50,000, but its indebtedness may be increased to \$10,000,000. It is said that it will open up rich coal regions.

### THE DEAL AT SALISBURY.

Interurban to Be Built Immediately to Concord—Oliver Has the Contract.

Thomas J. Jerome of Salisbury, N. C., one of the parties to the deal by which W. J. Oliver of Knoxville, Tenn., and others acquired a large interest in the Salisbury & Spencer Railway Co., says that associated with Mr. Oliver in the matter are E. G. Oates, president of the Mechanics' Bank & Trust Co. of Knoxville; T. A. Wright, attorney and banker, of the same city, and John M. Beall, general passenger agent of the Mobile & Ohio Railroad, St. Louis, Mo.

The Salisbury & Spencer Railway Co. now owns and operates the electric railways at Salisbury, Spencer and Concord, N. C., with 8½ miles of track, and it also owns and operates the electric-light and gas plants of Salisbury and Spencer.

It is proposed to extend the railway from Salisbury to Concord immediately, 22 miles, at a cost of about \$500,000. The extension will be laid with heavy new rails and the best materials will be used through the construction. The W. J. Oliver Company will have the contract, and all work will be done under the supervision of Mr. Oliver.

Continuing, Mr. Jerome says that the building of this new interurban line will give the Salisbury & Spencer Railway Co.

30½ miles of road altogether, exclusive of sidings, and will connect towns representing a population of over 50,000, with 24 cotton mills, the general shops of the Southern Railway at Spencer, several large furniture factories and a large number of other industrial enterprises, some representing the investment of considerable capital.

The Southern Power Co., adds Mr. Jerome, has spent millions of dollars developing and furnishing electric power to this community, and the great power plant at Whitney, only a few miles from Salisbury, will soon be finished and ready to furnish electric power to the public.

The Salisbury & Spencer Railway Co. is capitalized at \$400,000, and the controlling stock has been owned by W. F. Snider, M. L. Jackson, T. H. Vanderford and Thomas J. Jerome of Salisbury, and T. D. Manes of Concord, N. C. They have sold a large part of their stock to Mr. Oliver and his associates, which gives the company "great financial strength" and assures the building of the interurban line to Concord.

#### PENSACOLA COAL ROUTE.

##### Gulf, Florida & Alabama Promoting Plans to Build an Important Line.

The Gulf, Florida & Alabama Railroad, says a report from Pensacola, quoting Roy C. Megargel of New York, who is promoting the plan, will have a main line 265 miles long from Pensacola, Fla., to Jasper, Ala., with a branch from Cantonment to Bay Minette, Ala., about 40 miles. The track will have 70-pound rails, and 3000 ties per mile will be laid. The first construction will be from Pensacola to Muscogee, Fla., where connection will be made with the line of the Southern States Lumber Co., which road will become part of the new route. George A. Berry of New York will be engineer of construction, and will, it is expected, establish headquarters at Pensacola about April 15. Grading out of there is expected to begin within a month after that. Mr. Megargel is now negotiating for rails for 20 miles of line, delivery to be made in July, and he is further reported saying that he will also be in the market for 60,000 ties.

There will be two large bridges on the line, one over the Warrior and the other over the Alabama River, and they will be erected so as to permit the use of the heaviest modern equipment. At Pensacola there will be built a passenger station 150x40 feet, of either stucco or brick; also a freight house of brick, 200x55 feet. The main yard will have a capacity of 1000 cars. There will be an open pier 600 feet long and 100 feet wide, a covered pier of the same size, and a coal pier 600x50 feet, with automatic coaling pockets into which the contents of cars will be dumped from an overhead track. Trains will be dispatched by telephone instead of telegraph.

Mr. Megargel is reported as saying that negotiations are begun with one of the largest coal companies at the northern terminus of the road for the shipment over it of 300,000 tons of coal a year to be exported via Pensacola. Offices have been engaged in the Brent Building in that city.

#### WILL SPEND A MILLION.

##### Illinois Central Also Proposes to Use Other Large Sums in the South.

W. L. Park of Chicago, vice-president and general manager of the Illinois Central Railroad, is quoted in a report from New Orleans as saying that the company will spend about \$1,000,000 for improvements in that vicinity, and that President Markham has approved the expenditure of large sums in the South besides this.

The improvements referred to by Mr. Park include the double-tracking from Ponchatoula to New Orleans and the re-

vision of grades between McComb City and New Orleans, which work has already been started, and which will cost something less than a million. It is also intended to install automatic signals and interlocking in the vicinity of the city, and this will cost in addition about \$100,000. In fact, all along the line improvements, which were suspended immediately after the panic, will be generally resumed.

Locomotives and cars to cost several millions of dollars have recently been ordered, and most of them will be delivered within the next few months.

#### TERMINAL AND OFFICES.

##### Western Maryland to Erect Large Building at Hillen Station, Baltimore.

The Western Maryland Railway has purchased a block of 98 buildings adjoining its main terminal, Hillen Station, in Baltimore, and will, it is announced, erect thereon, including part of the land now occupied, a new passenger and freight station, together with offices, to insure commodious accommodations for its officials and employees who are now quartered in different office buildings. Hillen yards will be rearranged, and it is reported that the company contemplates building an extension down through the city to the water front, as it has the right to do under an old franchise, along the stream known as Jones Falls. There are no valuable buildings on the block purchased (they being mostly old dwellings), which is bounded by Hillen, High and Front streets. This will give the Western Maryland a frontage on Hillen street from Front to Exeter streets, a distance of 600 or 700 feet.

President Bush says that the preparation of plans for the work will be undertaken immediately, but it is too early to give figures as to probable cost of the improvements. While the company had planned to erect an office building separate from its terminal and in the center of the city, it was found impossible to secure a site at an available price. Nevertheless, the new structure will not be distant, being less than half a mile from the City Hall.

#### GETS MORE TELEPHONES.

##### Seaboard Air Line Places Contracts to Equip Over 600 Miles of Road.

The Seaboard Air Line Railway is placing orders with the Western Electric Co. for telephone train dispatching equipment covering more than 600 miles, with two complete circuits. This installation is being made as a direct result of the increased economy of the telephone over the telegraph, as experienced by over a year and a half of service on divisions extending from Richmond to Raleigh, with a branch to Portsmouth, Va., and from Raleigh to Monroe, N. C.

The first new division being equipped centers at Hamlet, N. C., and extends in one direction to Wilmington, a distance of 111 miles; also from Hamlet south to Columbia, 106 miles, and west to Rutherfordton, 157 miles, making a total of 374 miles, equipped with 36 stations.

The second division extends from Jacksonville to Tampa, with branches to Orlando and Venice, Fla., 265 miles in all, on which will be installed 38 way station equipments. The dispatcher in this case will be located at Jacksonville, and it is intended to operate the branches off the main line by means of polarized relays. The stations on the branches will be called only when they are desired, and the selectors will not be operated when stations on the main line are called.

The equipment to be installed on these divisions is of the latest type manufac-

tured by the Western Electric Co., which installed the present equipment on the Seaboard Air Line, and which (says an official letter) has supplied over 90 per cent. of the telephone equipment for the 37,000 miles of road so covered in the United States.

W. F. Williams is superintendent of telegraph of the Seaboard Air Line, and the Seaboard, under his direction, was the first road in the South to put this equipment in service.

#### New Railroads Planned.

The new railroad enterprises recently reported in various parts of the country include the following:

Tyler Traction Co., chartered in West Virginia to build from Sistersville via Middlebourne to Shirley, all in Tyler county; capital authorized \$500,000; incorporators, J. T. Ingram of Pursley, W. Va.; W. J. Neuenschwander, E. A. Durham, A. J. Jackson, Joseph McKay, Henry W. McCoy and John Kinkaid, all of Sistersville, W. Va. Line will be about 15 miles long.

Salisaw, McAlester & Southern Railway, incorporated in Oklahoma to build from Salisaw to McAlester, Okla., and thence to Honey Grove, Tex., about 190 miles; capital \$3,000,000; incorporators, Wm. B. Freeman, John Cavanagh, M. J. Smith, Wm. Fuller and A. F. Ringland, all of McAlester, Okla.

Delhi, Providence & Gulf Railroad, W. E. Monroe, president, Delhi, La., says that the proposed line will be 250 miles long from Lake Providence to Sabine Pass, La., via Delhi, Winnsboro, Alexandria and Gulf; survey not completed; route mostly level. W. Spire is vice-president and W. S. Buchanan secretary and treasurer.

Iberia, St. Mary & Eastern Railway, New Iberia, La., will open bids for construction within two weeks. Proposed line is 52 miles from New Iberia to Berwick, La., via Jeanerette, Charleston, Franklin and Patterson. It includes two draw span bridges over the Bayou Teche 150 feet each near Charenton and Franklin, respectively. Line reaches deep water at Berwick; route level. F. M. Welch is president, H. N. Pharr treasurer and H. A. Genung chief engineer, all at New Iberia, La.

Oklahoma, Kansas & Missouri Railway will be 35 miles long from Hattenville, Okla., to Columbus, Kans., and Joplin, Mo., via Lincolnville, Okla., Baxter Springs, Riverton and Galena, Kans., and includes a steel bridge 200 feet span over Spring River near Riverton, a small bridge near Hattenville and about 1800 feet of trestling. W. T. McCaskey is the contractor. Address, care of Rail Joint Co., Railway Exchange Building, Chicago, Ill. He is also vice-president of the railroad. Other officers are Wm. Houk, president and treasurer, Joplin, Mo.; M. C. Harper, general manager and secretary, Miami, Okla.; W. K. Palmer, chief engineer, Kansas City, Mo.

#### New Equipment, Rails, Etc.

The Kilby Locomotive and Machine Works, says a dispatch from Anniston, Ala., has just shipped two 75-ton locomotives of standard gauge to the Marshall & East Texas Railroad.

The Sandy Valley & Elkhorn Railway, the new line being built in Kentucky by the Consolidation Coal Co., placed its rail order of 5353 tons with the Carnegie Steel Co., Pittsburg, as noted last week in another column.

The Charlotte Harbor & Northern Railroad is reported in the market for a passenger locomotive, 25 steel phosphate cars of 40 tons each, and 25 hopper bottom gondola cars of 30 to 40 tons each.

The Gulf, Florida & Alabama Railroad, which is being promoted by Megargel &

Co., 5 Nassau street, New York, is reported in the market for 20 miles of 70-pound steel rails. About 60,000 ties will also soon be purchased.

The Buffalo Creek & Gauley Railway is reported getting prices on 20 hopper cars.

The Sand Springs Interurban Railway, Tulsa, Okla., is reported to have ordered a baggage and express car 41 feet long and two closed trailer cars, each 37 feet long, from the Danville (Ill.) Car Co.

The Harriman lines, according to a report quoting an official, have placed orders for 72,000 tons of rails for renewals, the contract being about equally divided between the Colorado Fuel & Iron Co. of Trinidad, Col.; the Illinois Steel Co. of Chicago, and the Tennessee Coal, Iron & Railroad Co. of Birmingham.

A press report from Wilmington, N. C., says it was announced at the offices of the Atlantic Coast Line that orders have been placed for equipment as follows: Fifteen Pacific passenger locomotives, 20 large freight locomotives, 25 passenger cars, 1 combination postal and express cars, 1400 box cars, 50 phosphate cars, 50 ballast cars, 20 caboose cars. The passenger equipment cars went to the Pullman Company, Chicago, and the box cars to the American Car & Foundry Co., St. Louis, as previously reported. Placing of other orders does not seem to have been announced. All the contracts are to be completed during the summer.

#### Shortening Ferry Transfer.

The Norfolk & Portsmouth Belt Line, according to a report from Norfolk, Va., will lease the tracks of the Virginian Railway between Sewalls Point and Norfolk and terminals of the Belt Line at Sewalls Point will be used for the landing of the ferry transfer of the New York, Philadelphia & Norfolk Railroad, instead of Norfolk. This will greatly shorten the length of the ferry transfer between Norfolk and Cape Charles City.

An agreement to this effect is said to have been reached at a recent conference of representatives of the railroads interested which was held at Norfolk. The lines benefited by the change are the New York, Philadelphia & Norfolk and the Chesapeake & Ohio, each of which will make considerable saving by avoiding the difficulty of moving cars on barges through the channel from Hampton Roads to Norfolk and Portsmouth. The leasing of the tracks will, it seems, render unnecessary an extension of the Belt Line to Sewalls Point, where a large ferry terminal will be established.

While this report alleges that an agreement was attained for the use of the Virginian Railway's tracks into Norfolk, another statement concerning the meeting is that while the subject of extending the Belt Line service was favorably discussed, it was not fully decided upon.

#### Meridian & Deep Water.

Charter has been asked in Mississippi for the Meridian & Deep Water Railroad Co., the applicants being C. F. Scofield and S. A. Neville of Meridian, Miss., and W. C. Stowell of Chicago, Ill. It is proposed to build a line from Meridian directly east to the Tombigbee River in Choctaw county, Alabama, altogether about 40 miles, and it will connect there with another line already chartered in the latter State. This connection, it appears, may be made with the Louisville & Nashville Railroad's branch that terminates at Myrtlewood, of which there have been rumors recently that its extension was contemplated.

Mr. Scofield was some time ago connected with the plan to build the proposed Mississippi River Western Railroad, de-



signed to extend from Meridian to Natchez, Miss., about 200 miles. It is rumored that steps to revive that plan may be undertaken in connection with this new enterprise, but nothing has been announced to indicate that such is the idea of promoters of the Meridian and Tombigbee line.

#### Coast Line Work at Savannah.

In a report from Savannah, Ga., J. R. Kenly, vice-president and general manager of the Atlantic Coast Line, is quoted as saying that the company will make improvements costing not less than \$200,000 at its yards south of Southover Junction, near there. There will be erected a roundhouse, a turntable and offices. Additional tracks will also be built between the intersection of the union station tracks and Ogeechee road and a point just east of the yards. This will relieve yard conditions in the city and will remove the necessity of lowering tracks between Anderson street and Southover Junction in the near future, although they will probably have to be lowered eventually. It is said that the movement of engines and cars into the city will be reduced about 60 per cent. when the changes are completed. The contracts, it is further stated, will be let immediately and the work should be finished in about six months.

#### Lynchburg Line in Full Use.

The Southern Railway will begin using for its passenger trains the new double-track low-grade line through Lynchburg, Va., on Sunday, April 16. Freight trains have been operated over the line for several weeks, and the beginning of passenger service will mark its full use. The revision through Lynchburg was begun nearly five years ago, and has involved an entire change of line for seven miles, a double track on very favorable grades taking the place of the old single track. A steel bridge 1860 feet long and 150 feet high over the James River and a tunnel 1300 feet long under Rivermont, a suburb of Lynchburg, are the principal features of the improvement. The old line will be retained for local freight and passenger service.

#### Whittier to Bassenger.

According to an official letter received, it appears that the Southern Colonization Co. is interested in the branch railroad which will be built by the Florida East Coast Railway from Whittier (on its new line now building to Lake Okechobee) to Bassenger, 34.7 miles. The route is via Pine Island, Deso and St. George. There are to be 27 bridges of pile bent construction, ranging in length from 10 feet to 200 feet. At Bassenger connection will be made with the Lillie Line boats. The construction will be done mostly by day labor, and the track will be laid under the inspection of the Florida East Coast Railway Co., engineer. Route is generally level. The officers of the Colonization Co. are T. B. Lynch, president; N. C. Halsey, vice-president; A. J. Nason, treasurer; Theo. M. Knoppen, secretary; C. J. Smith, general manager; C. H. Armstrong, chief engineer.

#### To Operate in Three States.

The Tri-State Railway & Electric Co. has been formed, says a dispatch from East Liverpool, O., to operate lines in Ohio, West Virginia and Pennsylvania; authorized capital \$3,000,000. It will have leases upon the Steubenville & East Liverpool Railway & Light Co., the East Liverpool Traction & Light Co., the Ohio Valley Scenic Railway Co. and the Steubenville, Wellsburg & Weirton Railway Co., the stock of the latter being owned. Franchises for light and power plants have also been taken over for Follansbee, Weirton and Wellsburg, W. Va., besides several

points in Pennsylvania, including Beaver Falls, Beaver, New Brighton, Rochester and Monacco.

#### Railroads in Georgia.

The Georgia Railroad Commission, says a dispatch from Atlanta, received reports during 1910 from 160 companies. These included 61 steam roads, including several terminal lines, 43 street railway, power and light concerns, 44 telephone and telegraph companies and 1 express company. The gross earnings of these in Georgia were \$55,976,272, an increase of \$7,096,262 as compared with the previous year, and the net earnings were \$18,524,867, an increase of \$3,413,169. The data collected show that there are now 7055½ miles of railroads in the State, an increase of very nearly 63 miles during the year.

#### Railroad Notes.

The Citizens' Railway Co., Waco, Tex., has purchased additional pay-as-you-enter cars, has built four miles of new line and has reconstructed old lines, including two concrete bridges.

The Oklahoma Railway Co., says a dispatch from Oklahoma City, has filed an amended charter increasing its capital stock from \$3,000,000 to \$15,000,000 to provide funds for improvements projected and heretofore reported. Grading has begun at Edmond, on the interurban between Oklahoma City and Guthrie.

The new union station at Denison, Tex., says a dispatch, has been opened for traffic. It was erected by the Missouri, Kansas & Texas Railway at a cost of \$250,000. The St. Louis & San Francisco Railroad and the Houston & Texas Central Railway will also use the terminal. James Stewart & Co. of St. Louis were the contractors, and O. D. Schmidt of the same city was the architect.

#### Southwest Oil Production.

Oklahoma, Texas, Louisiana and Kansas produced 67,302,374 barrels of crude petroleum in 1910, or nearly one-third of the total oil output of the United States in that year. Oklahoma led with 50,408,116 barrels, Texas being second, 8,603,862 barrels; Louisiana third, 7,290,396 barrels, and Kansas fourth, 1,000,000 barrels. Trunk pipe line deliveries from the Mid-Continent field, Oklahoma and Kansas amounted to 46,681,427 barrels, and the shipments of crude and fuel oil from Gulf coast points amounted to 20,761,324 barrels, the aggregate being nearly 10,000,000 greater than the aggregate in the two fields in 1909. A feature of the consumption thus indicated was the use of 902,613 barrels of fuel oil by the Kansas City Southern Railroad in locomotives and 29,696 barrels for other purposes during the year. From Port Arthur 9,658,385 barrels of crude oil and refinery products were shipped by vessel, and of the total, 68.7 per cent., or 6,226,389 barrels, was loaded by the Gulf Refining Co., which has published a valuable pamphlet entitled "Mid-Continent and Gulf Coast Petroleum Statistics," upon which these statements are based.

#### Commercial Turpentine.

The National Department of Agriculture has published as Bulletin No. 135 of the Bureau of Chemistry a study by F. P. Veitch and M. G. Douk of the quality and methods for the examination of commercial turpentine, which will interest turpentine farmers and those interested in the naval stores trade.

The Flint Manufacturing Co. of Gastonia, N. C., will increase its use of electric power and has ordered an electric motor from the Westinghouse Electric & Manufacturing Co. of Pittsburg.

## MINING

#### Tennessee—Land of Marbles.

It is generally known that Tennessee produces marble of a high grade in large quantity, but very few realize to what an extent marble beds occur in Tennessee, and what a variety of marbles have been found in this State. The marble beds now being worked all occur in one formation, and the marble itself has been called the Holston marble, from the Holston River. As originally laid down in the ocean, it probably occupied an area from 30 to 50 miles wide and 125 to 150 miles or more in length. At the time that the mountains of East Tennessee were formed all of the rocks were greatly folded and broken, and since that time large quantities of the rocks have been carried away by erosion. So that today the marble is only in narrow belts where the folded bed rises to daylight. Due to the number of folds into which the rocks have been thrown, there are several lines of outcrop of the marble, sometimes quite narrow, where the bed pitches into the ground at a high angle, and sometimes quite broad, where it lies more nearly horizontal. In addition to the Holston marble, which is today supplying the trade from this State, there are beds of similar marble in the Sevier shale of Knox and Sevier counties that have been worked to some extent. A bulletin by the State Geological Survey, now in press, mentions briefly some of the other marbles of Tennessee, and it will doubtless surprise many to know how widely marbles are deposited over the State. In a number of counties in East Tennessee is a compact black marble, beautifully streaked with white calcite that takes a fine polish. This marble was used to form the base of the columns in the Senate Chamber in the Capitol at Nashville. A green, serpentine marble has been reported from Union county. A magnesian marble of impure quality occurs in the Knox dolomite in places, and in Blount, Monroe and McMinn counties are conglomerates and breccia, which when polished resemble mosaic work. Beds of breccia on the Little Tennessee south of Chilhowee Mountains sometimes supply a beautiful stone, the angular fragments of different colors, when polished, presenting a pleasing effect. Similar beds occur in Greene, Cocke and Sevier counties, but they are not much worked owing to the hardness of some of the angular fragments.

Red variegated marbles are found in a number of counties west of the Cumberland tableland, notably on Elk River, in Franklin county, and at Oil Springs, on Leiper's Creek, in Maury county. Variegated marbles occur also in Western Tennessee in the counties of Henry, Benton, Perry, Decatur, Mayne and Hardin. Though somewhat inferior to those of the East Tennessee Valley, they nevertheless are valuable stones. A fawn-colored or brownish-red marble is found on Shoal Creek, in Lawrence county. A specimen of a similar stone from the same or a neighboring locality, now in the collections of the University of Tennessee, has been mistaken for a noted French marble. The stone is often variegated by fleecy clouds of green, red or white. Dove-colored marbles, some of fine quality, are found in Wilson, Davidson and Coffee counties, and in Rutherford is a pale yellow marble with serpentine veins of red and black dots. An olive-green marble of unknown extent is said to occur in Davidson county. In Anderson, Union, Hawkins and other counties in Eastern Tennessee have been found interesting specimens of cave marble or onyx. The specimens, as a rule, are small, and the yield limited. They are only used for small objects. It may be

asked why some of these other marbles are not being worked. There are probably two reasons; one, that in many cases they have no railroad facilities, or are not immediately on a railroad; probably of more importance is the fact that they, at least at the moment, do not quite meet the needs of the market. It may not be generally known that the marble that used to be known as Tennessee marble, and upon which the marbles of this State made their reputation, are now largely neglected and little mined, mainly because the taste for marbles has changed and the colors which pleased not many years ago do not give as much satisfaction as some of the lighter gray and pink marbles which are now being principally mined.

At present this State stands third among the States in the Union in the production of marble, the production ranging from \$500,000 to \$750,000. Tennessee marble at present being quarried has a great reputation for interior decoration, almost 80 per cent. of the output being used for that purpose. The marble also furnishes an excellent rough building stone, and many buildings are being built of it.

#### Bryan Coal Corporation.

The Bryan Coal Corporation has been chartered with \$600,000 minimum and \$1,000,000 maximum capital stock. It purchases from the estate of Joseph Bryan of Richmond, Va., 8000 acres of mineral land in Jefferson and Walker counties, Alabama. There are a number of operations on the property under lease, and it is the plan of the new corporation to actively develop the entire field. Frank Nelson, Jr., Birmingham, Ala., is president. Thomas B. Scott is vice-president and George Cole Scott is secretary-treasurer, both of 707 Mutual Building, Richmond, Va. Mr. Nelson and associates were referred to some time ago as buying this property for development.

#### Sulphur in the South.

In 1900 the United States produced only 3147 tons of sulphur. In 1909 there were mined 239,312 tons. The increase is due to the expansion of the industry in Louisiana, which produces the bulk of this country's sulphur. Some was also produced in 1909 in Nevada, Utah and Wyoming, and its occurrence has been discovered in Louisiana outside the South field in which the Union Sulphur Co. operates, and also at several points in Texas. Production of sulphur from domestic pyrite amounted to 111,182 tons. Pyrite production amounted to 247,070 tons, of which 130,024 tons were produced in the South, Virginia leading the country with an output of 114,176 tons. The value of the sulphur mined was \$4,432,066, and of the pyrite \$1,028,157.

#### Kentucky Asphalt Rock Deposits.

Referring to reports that he and associates will develop asphalt rock deposits in Carter county, Kentucky, S. M. Bradley of Morehead, Ky., telegraphs the MANUFACTURERS RECORD as follows:

"James H. Gardner, United States Geological Survey, Lexington, Ky., reports 600-acre asphalt rock vein from five to ten feet thick and good quality. Have not bought machinery. We are not working it. There is also six-foot vein of fine fire-clay on this land."

Reports are current at Lexington that Mr. Bradley and J. W. Shumate of Soldier, Ky., will develop the property, and that they are already negotiating with Eastern capitalists to establish manufacturing plants for utilizing the asphalt rock. Over 5,000,000 tons is the quantity which it is claimed underlies the land.

## TEXTILES

### The Pelzer Corporation Organizing With \$12,000,000 Capital Stock.

The Pelzer Corporation of Greenville, S. C., referred to several weeks ago as planned, has arranged to organize with a capital stock of \$12,000,000. Its president will be Ellison A. Smyth of Greenville, and he will be assisted in its management by John A. Law of Spartanburg, A. F. McKissick of Greenville and E. Carlisle Melvin of Selma, Ala. The consolidation is to be financed through New York capitalists, and will include the following companies: Dunean Mills, Conestee Mills and Monaghan Mills of Greenville; Belton Mills of Belton, S. C.; Pelzer Manufacturing Co. of Pelzer, S. C.; Ninety-Six Cotton Mills, Grendel Mills and Greenwood Cotton Mills of Greenwood, S. C.; Watts Mills of Laurens, S. C.; Riverside Manufacturing Co. and Toxaway Mills of Anderson, S. C.; Issaqueena Mills of Central, S. C., and Saxon Mills of Spartanburg, S. C. These plants have about 550,000 spindles and about 12,000 looms, manufacturing various kinds of cotton cloth.

### Southern Cotton Mill Men.

The annual meeting of the American Cotton Manufacturers' Association will be held at Richmond, Va., May 18-19. Its officers are Messrs. D. Y. Cooper, Henderson, N. C., president; E. A. Smyth, Greenville, S. C., vice-president; C. B. Bryant, Charlotte, N. C., secretary and treasurer; Charles K. Oliver, Baltimore, Md., chairman of the board of governors, including August W. Smith, Spartanburg, S. C.; W. A. Erwin, Durham, N. C.; Ridley Watts, New York; C. H. Moody, Alabama City, Ala.; W. T. Bryan, Athens, Ga.; Carroll Baldwin, New York; J. C. Rankin, Lowell, N. C.; L. D. Tyson, Knoxville, Tenn.; C. D. Tuller, Atlanta, Ga.; W. H. Harris, Pawtucket, R. I.; W. E. Beattie, Greenville, S. C.; Caesar Cone, Greensboro, N. C.; Scott Maxwell, Cordova, Ala., and J. P. Eddy, Providence, R. I.

### American Silk Industry.

In the past 50 years the annual value of the products of the silk-manufacturing industry in this country has increased from less than \$4,000,000 to nearly \$197,000,000. According to the Census Bureau, the value of products increased between 1899 and 1904 from \$107,256,000 to \$133,288,000, and between 1904 and 1909 to \$196,425,000. In the last-named year New Jersey led in the value of products, with \$65,298,000, Pennsylvania being second, \$62,035,000; New York third, \$26,519,000; Connecticut fourth, \$21,063,000; Massachusetts fifth, \$8,942,000, and Rhode Island sixth, \$4,584,000, these six States producing all but \$7,984,000 of the total.

### Dunean Mills Building Contract.

The Dunean Mills, J. Adger Smyth, Jr., president, Greenville, S. C., has awarded contract for the construction of the company's buildings to the Fiske-Carter Construction Co. of Worcester, Mass. This contract calls for completion by October 15. Contract has also been awarded for 5,000,000 bricks of light-gray color, to be laid in black mortar, for the buildings. These structures will provide space for 50,000 spindles and 1500 looms. The organization of the Dunean company with \$1,000,000 capital was fully outlined recently.

### The Dillon Mills.

The Dillon Mills of Dillon, S. C., has been chartered with \$750,000 capital stock for the purpose of consolidating the Dillon Cotton Mills and the Maple Cotton Mills

of Dillon and the Hamer Cotton Mills of Hamer, S. C. These three plants have 38,080 ring spindles and 3000 twister spindles for manufacturing yarns. W. M. Hamer will be president of the new company. In February the MANUFACTURERS RECORD announced that this consolidation was being planned.

### Elmore Cotton Mills.

The Elmore Cotton Mills of Demopolis, Ala., will be incorporated with \$50,000 capital stock to operate the plant owned by Benjamin F. Elmore and M. E. Anderson. This plant has 4000 spindles, produces waste yarns, and will be superintended by Thomas E. Ainley, recently with the Smith Blanket Mills of La Porte, Ind., and formerly with the Thorndyke Company of West Warren, Mass. It was mentioned last week as the Elmore Manufacturing Co.

### Clayton Linen Mills.

The Clayton Linen Mills of Greenville, S. C., has been chartered with \$200,000 capital stock by Raven I. McDavid of Greenville, R. L. Stanton of Providence, R. I., and associates. This company will build a mill to manufacture towels, curtains, etc., from imported Russian linen-mill waste. It has engaged J. E. Sirrine of Greenville as architect-engineer in charge.

### New Machinery Costing \$16,000.

The Statesville (N. C.) Cotton Mills has awarded contract to the Saco & Pettee Company of Newton Upper Falls, Mass., for the new machinery mentioned recently. This additional equipment includes 1000 spindles (three spinning frames), eight cards and other accompanying machinery. The installation will cost about \$16,000 and have a daily capacity of 1200 pounds of yarn.

### Change to Electric Drive.

The American Spinning Co. of Greenville, S. C., has decided to change its No. 1 mill from steam power to the electric drive, and will purchase its electricity from the Greenville transmission of the Southern Power Co. of Charlotte, N. C. Contract for a 600-horse-power electric motor has been awarded to the Westinghouse Electric Manufacturing Co. of Pittsburg.

### French Broad Manufacturing Co.

The French Broad Manufacturing Co. acquires the Asheville (N. C.) Quilt Mills, containing 84 broad looms, bleaching and finishing equipment, electrical drive, etc. This new company was recently reported incorporated with a capital stock of \$250,000.

### Hadley-Peoples Addition.

The Hadley-Peoples Manufacturing Co. of Siler City, N. C., has completed its addition, under construction for some months. It has erected a one-story 77x80-foot building of standard mill construction and installed 3500 spindles, with accompanying carding and twisting machinery.

### Absorbent Cotton, Cotton Gauze, Etc.

It is contemplated to install machinery for manufacturing absorbent cotton and its products, towels, cotton gauze and cheesecloth, at Dallas, Tex., and correspondence is desired with the makers of the necessary machinery. Address P. O. Box 505, Dallas.

### Cotton Duck, Denims, Rope, Etc.

The Papooskin Company of Savannah, Ga., wants prices on cotton duck, denims, cretonnes, satines, silks, mosquito nettings, cotton rope, etc.

### Textile Notes.

The Chadwick-Hoskins Company of Charlotte has awarded contract for another comb for its Louise mill.

C. C. Groat of New York plans to purchase the Williamsburg (Va.) Knitting Mills Co. and to install new machinery costing \$40,000.

James P. Gossett, president of the Calhoun Mills, Calhoun Falls, S. C., advises there is no truth in the rumor mentioned last week that his company will add spindles.

The Salisbury (N. C.) Cotton Mills will build a raw stock dyehouse and add 34 looms. Contracts have been awarded. The Crompton & Knowles Loom Works of Worcester, Mass., obtained the looms contract.

The Cleveland Mill & Power Co. of Lawndale, N. C., will equip its cotton mill with turbo-humidifier system and compressed-air cleaning system. It has awarded contract to the G. M. Parks Company of Fitchburg, Mass.

## LUMBER

[A complete record of new mills and building operations in the South will be found in the Construction Department.]

### An Optimistic Outlook.

In his annual report to the Board of Trade of Savannah, Ga., President J. A. G. Carson was optimistic over the outlook for business in which Savannah is vitally interested. He said, as to general conditions:

"We may congratulate ourselves upon the fact that while the business of the United States as a whole is in a very unsatisfactory condition, the depression in the South is not so great as in other portions of the country, and in our own State business is by no means at a standstill. Our large cotton crop and the excellent price which it has brought has stimulated trade in every channel and made its influence felt throughout our borders.

"To recapitulate the financial situation, confidence has been restored, the country is thoroughly liquidated, and money is in plentiful supply, the deposits in the banks, trust companies, etc., in New York alone having reached the enormous total of \$3,800,000,000. When the present depression is over—and the opinion of the best informed is that it must soon end—we may confidently expect an era of the greatest prosperity that this favored land of ours has ever known."

Dealing with the businesses in which Savannah is vitally interested, President Carson said:

"Unquestionably building conditions are improving all over the country, and the present prospects are that a very prosperous season will ensue during the present year. The excellent condition of the naval stores industry, most producers reaching out and securing every available pine for turpentine purposes, necessarily means that the output of lumber will be affected, and shortness of output always means higher values. It is not anticipated that much trouble will be experienced in supplying the full demand, especially in view of the fact that a large percentage of the supply will be moved from the Gulf States, especially Texas, where the naval stores industry is not pushed to the same extent as it is in the territory tributary to the Atlantic coast. On account of Savannah's superior transportation facilities it is estimated that these shipments for the ensuing season will continue to be around 200,000,000 feet. To do this, however, she must draw from the territory that naturally belongs to other ports, as well as competing

largely with the all-rail movement. This, however, can be successfully done, especially into Pennsylvania, New York and ports east of Boston.

"To sum up the situation, the lumber manufacturers and wholesalers feel very jubilant over the outlook, and it is to be hoped that they will realize the profit to which they are entitled in the manufacture of this product and cease to sacrifice the timber of the Southern States without a fair and legitimate margin to the timber owner or manufacturer. It is a well-known fact that our forests are rapidly disappearing, and within a few years it is going to be a very difficult matter to produce the larger sizes, which today are the only means of the manufacturer bringing up the general average of his product to a living basis.

"The present high prices of spirits of turpentine and rosin are legitimate, and based upon the laws of supply and demand. The advance as compared with other commodities whose statistical position at times has been relative is not extreme. Many of us remember when wheat sold at 55 cents per bushel, afterwards advancing to \$1.30 per bushel; we have seen pork sell from \$7.25 per barrel to \$27 per barrel; corn from 25 cents per bushel to \$1 per bushel; dry salt meats from 3 1/4 cents per pound to 16 cents per pound, and oats from 18 cents per bushel to 50 cents per bushel. The supply of gold is continually increasing and the purchasing power of a dollar decreasing. The prices for both spirits of turpentine and rosin for the future depend entirely upon the producer. If he manufactures much it means a low price; if he produces no more than the world requires for consumption it means a relative high price, such as we find prevailing at the present time."

### Ascension Red Cypress Co.

By May 1 the Ascension Red Cypress Co. of New Orleans will be operating its new plant, referred to last September, when the development plan was announced. O. H. Williams, secretary-treasurer of the company, writes:

"We have erected a double-band sawmill, having installed Clark Bros. (Belmont, N. Y.) nine-foot bands. This company has about 300,000,000 feet of cypress timber, including about 10 per cent. of gum, oak and ash. The sawmill building is wood, two stories, with filing-room overhead, concrete foundation, boiler-house fireproof, engine-house fireproof, drykiln fireproof. We have shingle mill and sawmill, but have not yet put in a planing mill, which we may do about July next. We have built about 100 houses, and will probably build about 40 additional, but same will be simply frame structures for colored employees. The plant complete will stand about \$250,000. The power plant consists of seven boilers from Houston, Stanwood & Gamble Company, Cincinnati, 72 inches by 18 feet, 150 horsepower each. Plant is provided with standard underwriters' pump fire protection, electric-light equipment and air lifts for the trimmers. Plant is located at McElroy, La., a new town on the Louisiana Railway & Navigation Co. railway, 50 miles northwest of New Orleans, in Ascension parish. The timber supply is equivalent to about 10 years' cut of the mill. Offices of the company are at 403-404-405 Whitney-Central Building, New Orleans. Officers are: E. B. Williams, president, New Orleans; John T. McElroy, vice-president, Odessa, Tex.; O. H. Williams, secretary-treasurer, New Orleans. The directors are E. B. Williams, John T. McElroy, O. H. Williams, E. E. Sykes of New Orleans, La.; E. E. Overstreet and Geo. R. Collett of St. Louis, and W. B. Tschanner of La Crosse, Wis."

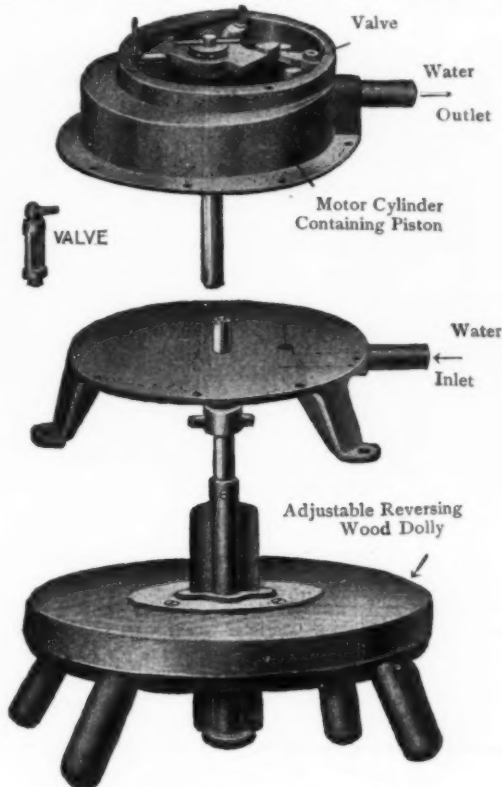


# MECHANICAL

## Bates Water-Power Washing Machine

Among the various devices which have been introduced to save labor in domestic life is the modern washing machine. There are various types, one of which is illustrated herewith. This is a water-power washing machine, and it is manufactured by the D. L. Bates & Bro. Company of Dayton, O. It is described as follows:

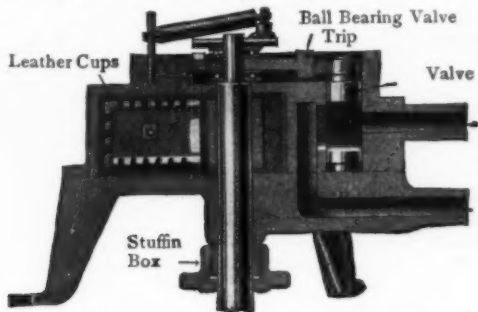
"The 'Ladies' Friend' Gearless No. 1



BATES WATER-POWER WASHING MACHINE.

makes wash day a day of pleasure instead of a day of drudgery. No more strained backs. No more drudgery on washday. Turn on the faucet and the machine does the work while the lady of the house attends to the smaller details of wash day. The water enters the lower spout, passes upward and enters a five-eighths-inch hole, in which is fitted loosely a straight two-way valve, that regulates the direction of the flow of water as it enters the cylinder. On the center shaft is attached a wing or piston head, packed with leather, similar

The tub is the strongest and best obtainable. They are made from select and thoroughly seasoned white cedar, and are finished in a furniture varnish finish with aluminum trimmings. All the tubs are equipped with four legs, box wringer board and patent hinged lid. The inside of the tubs are corrugated throughout and are provided with a strong, especially treated wood adjustable four-pin dolly, which has a reciprocating, half-revolution movement. A 10-year-old boy can take this motor apart and put it together. The construction is



BATES WATER-POWER WASHING MACHINE.

to the ordinary pitcher pump. As the water enters the cylinder at the right, the hydraulic pressure in the rear of this wing pushes it ahead, describing an arc or half-circle, while the water ahead of this wing exhausts through the opposite side of the valve and out through the upper spout. Before the piston reaches the end of the stroke the pin at the top of the shaft engages the ball-bearing valve trip, to which is attached a coiled bronze spring. The instant this spring passes over the center of shaft the trip reverses the valve, shut-

ting off the entrance of the water at the right and opening the valve at the left side, thus reversing the operation. The valve is merely dropped into the opening, and can be removed with the fingers or a pair of pliers. The top cap, in which the mechanism works, is packed with heavy grease, so all working parts work right in oil. There is not even an oil hole to look after. Should the leather in the cylinder ever shrink or become hard, caused by the machine standing unused, they will soon swell to their normal condition by turning water into the motor and working the dolly back and forth a few times by hand.

## Avery Traction Steam Shovel and Crane.

In addition to motor trucks and traction engines, the Avery Company of Peoria, Ill., has developed a combination of the undermounted traction engine and special steam shovel and crane attachment, which presents many interesting features. Two accompanying illustrations give a good idea of the construction of this combina-

tion of tractor, crane and shovel. This Avery traction engine is adapted to all kinds of work for which a traction engine is used, and can be detached for purely traction and belt work. In this combination the shovel frame is coupled to the engine drawbar, and cables for carrying the crane reach from iron hooks on each side of the smoke box on the front end of the boiler. The machinery for operating the shovel and crane is mounted on a steel

thus securing proper draft in the boiler furnace and eliminating annoyance from exhaust steam. The framework is so arranged that it can be mounted on a third wheel and pulled sideways in order to travel readily on ordinary roads and to cross narrow bridges.

This Avery combination is designed for digging drainage and irrigation ditches, loading gravel, building levees, stripping coal, street excavating, digging sewers and



AVERY COMBINATION DIGGING AN IRRIGATION DITCH.

framework independent of the traction engine. This framework is carried on two wheels, 36 inches in diameter and 20-inch face. The main frame is strongly built of steel beams and channels, and well braced, making it substantial and rigid. Booms are made of any length desired, and are provided with independent truck to run on when moving from place to place. It is claimed that such moves can be made in approximately the same length of time as would be required for moving a traction engine the same distance.

The shovel is of special Avery design.

for other similar work. It is already largely used.

## Raleigh Company's Logging Car.

Because of the demand for cars needed in log and timber transportation, attention will be attracted to the accompanying illustration of a logging car presenting improved features of construction and operation. This car is the result of experience in handling and building cars of this character. It is built by the Raleigh Iron Works Co. of Raleigh, N. C., whose president, William T. Harding, is



AVERY COMBINATION BUILDING A LEVEE.

and is made in two sizes, three-quarter yard and one yard capacity. It is handled by the two cables in filling, lifting and dumping, and will fill readily in extremely hard soil or other material. It is fitted with a special automatic self-tripping device. The shovel and boom are operated by a pair of double cylinders, each seven inches in diameter and having a 10-inch stroke. Steam is taken from the traction engine boiler through a double swivel steam joint, and the exhaust steam is returned through the same swivel point to the smokestack on the traction engine,

the inventor and has patented the important features and improvements. One of these features is the device for at once holding the stakes in positive and fixed position and yet making what the users testify as being the most satisfactory unloading device of its kind. An unsolicited testimonial received by the Raleigh Iron Works Co. from a firm that uses these cars extensively brings out the advantages concisely and conclusively. In this letter from the Damascus Lumber Co. of Damascus, Va., it is stated that: "I want to congratulate you on this logging car.

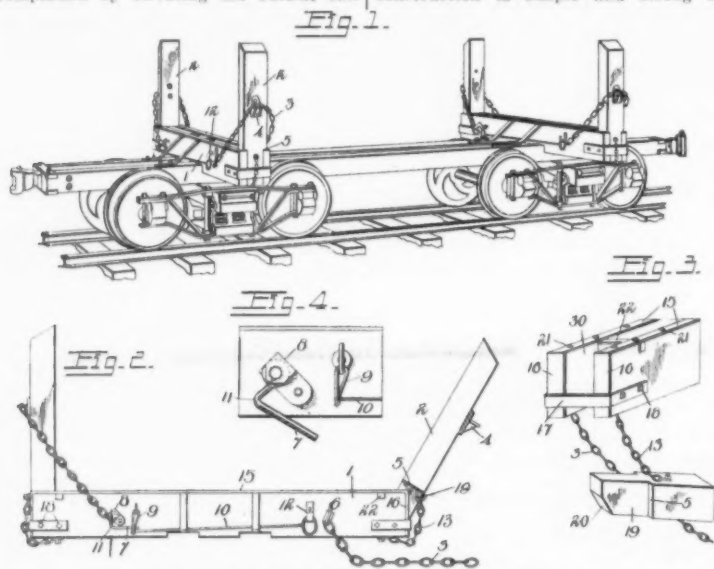
It is one of the most perfect cars that I have seen. We have had this car in use for a year, along with five other cars of the same pattern. We have been using these cars on very heavy grades and bringing the logs from a very mountainous country, and these six cars have never cost us a dollar for repairs, and we have loaded them at the maximum. My experience has been that with any other we have ever used we have always had more or less trouble, and I have had experience with practically all of the different types of cars that are made by the principal manufacturers in the United States. I cheerfully recommend this car to any lumberman needing a strong, well-made logging car. After using these cars for a year I have not detected any weak point, and they are perfect in every particular."

The Damascus Lumber Co. has purchased 40 additional cars of this type since its experience of the six mentioned.

The stake rigging is an invaluable feature where steam loaders are used, and as many as 17 of these cars in one train have been unloaded free of every log without the use of a cant hook, the stakes being tripped with absolute safety from opposite side of car and the load rolling from the car into pond. This unloading is accomplished by elevating the outside rail

with ordinary stakes. In order that the stakes may be readily unshipped the latch hook is so pivoted that it can be easily tripped by the pull bar 10 from the safe side of the car. The strain of this chain is taken upon the casting 8, and the securing bolt passes through the bunk beam and forms the fastening 6 on the other side with apparent structural advantages. A keeper, 12, is provided for the free end of the tripping bar, so there is no danger of accidentally tripping the chain 3. An advantage of this stake is that there are no hinged attachments at the base to become damaged and render the use of the stakes uncertain, but they are detachable, and only held by a chain, so that they will not be lost, and may drag naturally with one end on the ground when not shipped in place.

Another important feature is the means employed in ironing the bunks to prevent wear and splitting. To this end a pair of iron straps, 15, are passed along on top of each bunk and down the ends, as at 16, and across the ends an additional strap, 17, extends a suitable distance along the vertical side of the bunk and is bolted thereto by fastenings 18. The details of the construction at the base of the stake are shown, and it is apparent that the construction is simple and strong and



RALEIGH IRON WORKS CO.'S LOGGING CAR.

of the track at the logging deck, giving the load the proper angle, so that when the stakes are tripped the logs immediately roll off the car.

An important consideration in the use of this car is the large size of loads that can be hauled without the use of logging chains and the rapidity with which the load can be discharged, with the great advantage in time saved. These points, together with the safety, and the fact that there is no strain on the end of the bunk at the base of stake, is bringing this car into general favor.

Another strong feature of the car is the draft gear, which is entirely free from such accidents as tail pins pulling out while hauling, since the construction of this car eliminates the troublesome tail pin.

The illustration shows the construction of the car with the patent stake and bunk beams in detail. The stake 2 is provided with a bracket 4 well up the stake from the base, and over this bracket the chain 3 passes loosely, when the stake is shipped in place, and this chain is then secured by a latch hook so located on the bunk beam that the chain crosses the angle in such a way that logs will rest on the chain, thereby holding the stake firmly in place by bringing a downward and inward thrust upon it, instead of the outward breaking thrust occurring at this weakest point

capable of resisting the hard usage to which logging cars are subject.

#### Manufacturing Transmitters and Receivers.

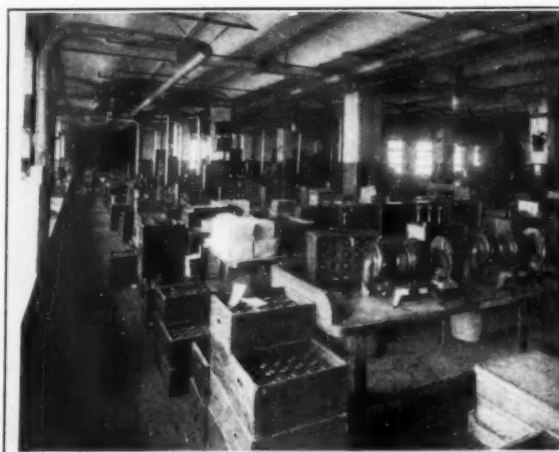
The manufacture, inspection and testing of telephone instruments form an interesting story. Some idea of the magnitude of this branch of the telephone industry may be had from the statement that over 1,000,000 pairs of transmitters and receivers were manufactured during 1910 by the Western Electric Co. of 463 West street, New York, and Hawthorne, near Chicago. Fifteen hundred tons of brass, 300 tons of steel and at least 200 tons of rubber and other raw materials, including 35,000,000 screws, were used. This apparatus is made in the big factory fronting on West street, New York, which ranks in importance next to the immense Hawthorne works of the company. See two accompanying views—final assembly of receivers and transmitters.

The transmitter is a delicate piece of apparatus, and several of its parts must be held to such close dimensions that the Western Electric Co. was confronted with the problem of making not only the telephone instruments, but much of the necessary testing apparatus and measuring instruments. Such instruments as those used to measure the thickness of the mica, which is held to within three ten-thou-

sandths of an inch, were made in the company's own shops. It is interesting to note that in order to secure mica that can be cleft to such small dimensions it is found necessary to import it from India, and that because of the difficulty met with in separating even this selected mica into exactly the right dimensions fully 80 per cent. is rejected. Another important operation is the manufacture of the carbon granules contained in the transmitter button. These granules must have exactly the right degree of hardness, be of uniform size, and just the right amount of carbon granules must be used. The carbon is measured in a cup having a steel cut-off,

not measure to the standard transmitter must go back for readjustment. Besides the transmission test, the transmitters must also survive what is known as the mechanical inspection, which includes a minute, detailed inspection of every one of the piece parts going to make up a section of the instrument, each group of parts as assembled, and finally the complete instrument.

The receiver is another delicate piece of electrical apparatus, and to manufacture it successfully requires special machinery and skilled labor. The steel from which the magnets are made must be carefully chosen, and then comes the proper tem-



FINAL ASSEMBLY OF RECEIVERS.

perature of the annealing furnaces is kept at a predetermined uniform heat by means of an electrical indicator. By placing the steel in the furnace for a prescribed time the exact conditions for producing the fine degree of temper are obtained. Another important member of a receiver is the vibrating diaphragm, whose thickness must be held to within two-thousandths of an inch. The space between the ends of the pole pieces and the diaphragm must be held to a dimension as close as fifteen hundredths of an inch. The receivers are given the same rigid talking and mechanical tests as those given to the transmitters.

Since the primary function of a transmitter is to transmit the human voice, it becomes necessary in testing their efficiency to make use of the human voice, and thus

pering and magnetizing of it. The temperature of the annealing furnaces is kept at a predetermined uniform heat by means of an electrical indicator. By placing the steel in the furnace for a prescribed time the exact conditions for producing the fine degree of temper are obtained. Another important member of a receiver is the vibrating diaphragm, whose thickness must be held to within two-thousandths of an inch. The space between the ends of the pole pieces and the diaphragm must be held to a dimension as close as fifteen hundredths of an inch. The receivers are given the same rigid talking and mechanical tests as those given to the transmitters.



FINAL ASSEMBLY OF TRANSMITTERS.

the human element enters. The volume and articulation test is made over a circuit which is the equivalent of an actual line 200 miles long. The operator, standing at the receiving end, signals back to the man testing the transmitter, telling him whether the volume and the articulation is satisfactory. In order to eliminate carelessness as far as possible from this test, the inspectors do the talking and receiving in pairs. In the morning one does the talking while the other is receiving, and in the afternoon the operation is reversed. By long training at this work these men are able to pick out small variations in efficiency, and any transmitter that does

ters mentioned above. Maximum efficiency over the longest possible period of service both in the transmitter and receiver is the result of the care taken in the manufacture of this apparatus.

#### Trus-Con Steel Insert.

The Trus-Con pressed steel slotted insert, manufactured by the Trussed Concrete Steel Co. of Detroit, has been placed on the market for builders of reinforced concrete construction. This insert is used in concrete slabs, beams or columns to provide a proper attachment for shaft hangers, sprinkler systems, fixtures, etc., and by their use the subsequent expensive



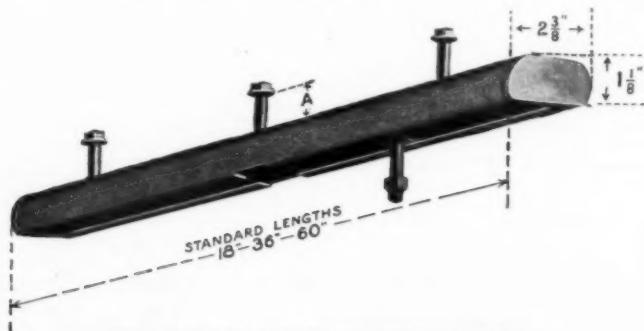
drilling into concrete after completion of the work is obviated. Trus-Con slotted inserts are built into the concrete during construction by merely attaching to the wood centering, and the concrete on hardening thoroughly imbeds them and holds

meeting each pair of strands is unlaidd two full turns back. See the half strands, No. 3 and No. 4, below the rope. Each strand is now divided equally, one-half of each strand is laid forward to the center of the space between the two dropped half

rope is now held and opened with a marlin spike, as shown in Fig. 7. Fig. 6.—Take strand No. 3 and lay it around half strand No. 4 until it meets half strand No. 4. Untwist the threads in the loop as shown, and draw them in until the threads run in the same direction as they do in the main body of the rope, as shown in No. 6. Repeat the same operation in the opposite direction, using half strand No. 4 to meet half strand No. 3. This point is now ready to tuck. Treat all strands where they meet the same. Figs. 7, 8 and 9 show the operation of tucking. Now, cut half strand No. 3, for convenience, and take out one thread and one thread out of No. 4, or the tucking strand, insert the marlin spike so as to open the strand, holding the rope as shown. Pull the remaining threads of No. 3 out from under B, making room for No. 1. Draw half

Continue to repeat this operation, dropping a thread out of each half strand until all the threads are dropped. Treat all strands alike, when rope will have appearance shown in Fig. 9. Now, cut the threads off close to the body of rope, which gives it the appearance of Fig. 10. In splicing a three-strand rope the operation of measuring back, tying, unraveling and butting together is the same as in a four-strand. There is one pair of strands less, and you lay out one pair of strands in each direction, leaving a tucking end and one pair of strands remain in center. Every other operation is the same as a four-strand rope."

The Louisiana Development League has elected for the year Messrs. Edward Wisner, president; L. M. Pool and Leo A. Marrero, vice-presidents; J. W. Jay, treas-



TRUS-CON PRESSED STEEL SLOTTED INSERT.

them rigidly in place. After the work is finished only a narrow slot can be seen flush with the concrete, and the head of the bolt can then be inserted in the square opening and slipped along the slot until the desired location is found. The liberal size of the slot allows a wide variation of location for this bolt, which renders it applicable for any class of work. Many advantages are presented by this new Trus-Con pressed steel insert, among them being the special washer used with regular shaft hanger bolts to prevent turning after insertion of the bolt in the slot; the improved shape of the insert with its beveled sides and detachable caps; its reduced thickness, which permits of constructing a thinner slab than heretofore and the possibility of securing a longer slot than the standard by merely abutting the inserts and removing the end caps for that purpose. An accompanying illustration gives a good idea of the new insert's construction and improved design. The insert is made of the highest grade of pressed steel, and is supplied in three standard lengths as shown.

### How to Splice a Rope.

How to splice a rope is a knowledge that may be useful under many conditions, and especially in industrial plants where the rope drive is used to transmit power. Considerable attention has been given to this by the Dodge Manufacturing Co. of Mishawaka, Ind., and that company's first vice-president offers the method explained as follows:

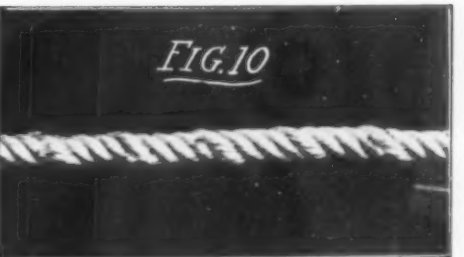
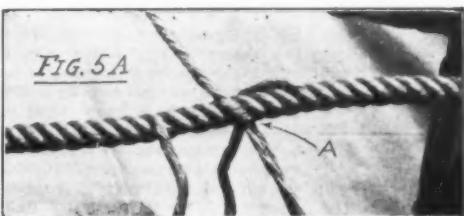
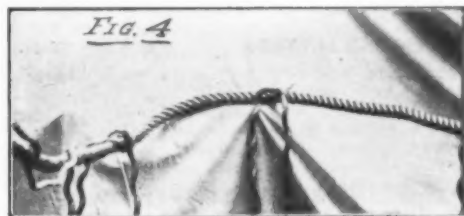
"Many interesting experiments in rope splicing have been made in an effort to get a splice that will fill the bill in every particular in connection with the American system of rope driving. A long splice that has so far given the best of results is presented in the accompanying views. The latter show each successive operation in splicing a one-and-one-half-inch four-strand rope.

"Fig. 1.—After the rope has been tied and unraveled, measure back from the end of the rope the necessary distance, about seven feet for one-and-one-half-inch rope, and tie securely with a piece of twine. A good rule for all sizes of rope is to measure back 60 diameters of the rope to be spliced and tie. Then unlay the strands of each end back to the twine tie. Fig. 2.—Cut the core close to the end of solid rope and put the core ends together and pair the strands together. Fig. 3.—Taking one pair of strands, unlay one and lay in the other until the strand is laid in, leaving sufficient end to do the tucking. Then take another pair, unlay and lay in, leaving your tucking ends. Fig. 4.—Now treat the remaining two pairs of strands in the same manner, so as to leave the three spaces between strands same distance apart. Fig. 5.—From the point of

strands and tied in a simple knot, so as to have the threads running the same direction as they are running in the rope. See A in No. 5-A after tie is made. The

strand No. 4 over and under, taking the twist out of threads, as shown in No. 8. Pull down firmly in the direction the strands run in the main body of rope.

urer, and A. B. Graves, secretary, and has determined to establish at New Orleans a permanent exhibit of farm products of the State.



HOW TO SPLICE A ROPE.

# Construction Department

## TO OUR READERS!

In order to follow up properly the Construction Department items, please bear in mind the following statements:

### EXPLANATORY

The MANUFACTURERS RECORD seeks to verify the items reported in its Construction Department by full investigation. It is often impossible to do this before the item must be printed or else lose its value as news, and in some items it is found advisable to make statements as "it is reported" or "rumored," and not as positive information. If our readers will note these points they will see the necessity of the discrimination. We are always glad to have our attention called to errors that may occur.

### HOW TO ADDRESS

The name of one or more incorporators of a newly incorporated enterprise should always be shown on letter addressed to the official headquarters or to the town of the parties sought, as may be shown in the item. Sometimes a communication merely addressed in the corporate or official name of a newly established company or enterprise cannot be delivered by the postmaster. By following these general directions the postoffice will be enabled to deliver your mail promptly, although it is inevitable that some failure by the postal authorities to deliver mail to new concerns will occur.

### WRITE PERSONAL LETTERS

In communicating with individuals and firms reported in these columns a letter written specifically about the matter reported will receive better and quicker attention than a circular. In most instances a return postal card or addressed and stamped envelope should be enclosed with letter.

"In correspondence relating to information published in this department, it will be of advantage to all concerned if the Manufacturers Record is mentioned."

The Daily Bulletin of the Manufacturers Record is published every business day in order to give the earliest possible news about new industrial, commercial, building, railroad and financial enterprises organized in the South and Southwest. It is invaluable to manufacturers, contractors, engineers and all others who want to get in touch at the earliest moment with new undertakings, or the enlargement of established enterprises. The subscription price is \$25 per year. On all advertising contracts in the Manufacturers Record for three months or longer a subscription for the contract period to the Daily Bulletin is included.

### BRIDGES, CULVERTS, VIADUCTS

Ark., Fort Smith.—Fort Smith and Van Buren District, Roy M. Johnston, secretary, will construct embankments protecting upstream slopes and pave approaches to bridge now under construction over Arkansas River at Van Buren, Ark.; bids opened April 10; offices of district are in Lyman Real Estate Co.'s Bldg.

Fla., Jacksonville.—Duval County Commissioners granted five-year franchise to Cedar Springs Co. for construction of toll bridge over Cedar Creek at 63d St.; creek at proposed site has width of 200 feet.

Ga., Thomasville.—Thomas County Commissioners, C. M. Smith, chairman, will purchase material and construct steel and concrete bridges; small structures; no bids. (Recently noted.)

Ky., Barbourville.—Knox County Fiscal Court ordered construction of six steel bridges.

Ky., Louisville.—Roy W. Burke, First Assistant City Engineer, has designed bridge to be constructed over Bear Grass Creek at Underhill St.; 190 feet long; span of arch 40 feet; reinforced concrete; carriage way will be 50 feet wide and paved with vitrified brick; walks on either side will be 12 feet wide and paved with asphalt; estimated cost \$15,000.

La., Charenton.—Iberia, St. Mary & Eastern Railway, H. A. Genung, chief engineer, New Iberia, La., will construct two draw spans, 150 feet each, across Bayou Teche, near Charenton.

Md., Denton.—Caroline and Dorchester County Commissioners are arranging for construction of bridge across Linchester River, near Preston, Md. Address Caroline County Commissioners at Denton, Md.

Md., Sharptown.—State Roads Commission, Union Trust Bldg., Baltimore, Md., will construct proposed bridge over Nanticoke River; structure will be 1000 feet long, with 75-foot draw, and cost about \$50,000.

Md., Towson.—Back River bridge contract was awarded to Andrew Miller Company, Dundalk (P. O. Baltimore or St. Helena), Md. (Not to Andrew J. Miller & Co., as recently incorrectly stated.)

N. C., Charlotte.—Piedmont Traction Co., Thomas B. Lee, chief engineer, Charlotte, will let contract April 20 for construction of bridges over main Catawba and South Fork Catawba rivers in North Carolina and over Reedy and Saluda rivers in South Carolina; also five underpasses at tracks of other railroads. (Contract recently noted at Greenville, S. C., awarded to William J. Oliver of Knoxville, Tenn., for construction of bridge and grading of roads from Greenwood to Spartanburg, S. C.)

S. C., Union.—Union county, through J. H. Speers, Road Supervisor, awarded contract to York Bridge Co., York, Pa., for erection of steel-trussed bridge; steel cylinder piers; length 80 feet; 12-foot roadway.

S. C., Clover.—York county, Thos. W. Boyd, County Supervisor, Yorkville, S. C., will let contract April 21 for construction of 100-foot steel bridge across Crowder's Creek at Davis' mill, near Clover. (See "Machinery Wanted.")

Tenn., Benton.—Polk County Commissioners will issue \$50,000 of bonds for construction of two steel highway bridges. J. H. Williamson, chairman, County Court, Lock Box 163, may be addressed.

Tenn., Chattanooga.—Bridge Commission awarded contract to Converse Bridge Co. of Chattanooga at \$1356 to construct bridge on North Chickamauga Creek; structure will be of steel, 90 feet long, with concrete abutments.

Tenn., Memphis.—Shelby county will construct 90-foot steel bridge over Jeter Creek, on Cuba and Woodstock Rd.; also 160-foot bridge over Big Creek, on Lucy and Locke Rd.; steel bridge at Bell's switch, about six miles south of Memphis; latter will require 60-foot span and 80 feet of approach; bids received until April 15; St. George Richardson, County Engineer. (See "Machinery Wanted.")

Tex., Angleton.—Brazoria county voted issuance of \$100,000 of bonds for construction of two bridges across Brazos River, at Brazoria and Columbia; structures will probably be of steel and from 600 to 800 feet long; J. W. Munson, County Judge. (Recently mentioned.)

Tex., Lampasas.—County Commissioners will receive plans and bids April 20 for construction of steel bridge across Lampasas River, recently noted; main span 140 feet; two approaches, 45 feet 4 inches and 14 feet 2 inches; dirt fill, 133 feet; cost \$5000 to \$6000; M. M. White, County Judge. (See "Machinery Wanted.")

Va., Courtland.—State Highway Commission, Richmond, Va., awarded contracts to Virginia Bridge & Iron Co., Roanoke, Va., to construct 12 steel bridges in Southampton county; total cost \$21,000.

Va., Danville.—City awarded contract to Thomas Sheehan, Weldon, N. C., at \$38,810 to construct bridge across Dan river on Union St.; reinforced concrete; 20-foot roadway; 1000 feet long; Wilbur J. Watson, consulting engineer, Cleveland, O.; J. O. Magruder, City Engineer. (Recently mentioned.)

Va., Houston.—Halifax County Board of Supervisors reported to award contract to G. H. Derrick of Houston for 34-foot span reinforced concrete bridge across Tobet Creek and to contemplate letting contract to same party for several other bridges.

Va., Luray.—Page county awarded contract to Virginia Bridge & Iron Co., Roanoke, Va., at \$11,030 to construct steel bridge 500 feet long across Shenandoah River. (Call for bids recently noted.)

Va., Hanover.—Bridge over Pamunky River (recently noted) will be built by King William county under supervision of P. St. J. Wilson, State Highway Commissioner, Hanover county contributing to fund; Hanover county will erect iron bridge over South Anna River at the "Ground Squirrel," on

Louisa Rd., 10 miles from Ashland; this to be 120 foot span, 12-foot roadway; small amount of masonry; improvements to cost about \$2250.

Va., Richmond.—Sub-committee of Council Committee on Streets recommended adoption of design B, submitted by I. J. Smith & Co. of Richmond (design by Concrete Steel Engineering Co. of New York), for reinforced concrete arch bridge over James river to replace Mayo's bridge; Melan system of concrete reinforcement; to carry 50-ton electric cars and 150 pounds per square foot on roadway; total length 1721 feet; width of roadway 44 feet, with sidewalks on each side and concrete railing of 8 feet; approach on Mayo's Island on each side, trolley poles over each pier, street railway tracks, 16-inch gas main, 12-inch water main and ducts for high and lower power wires; 2 alternate designs submitted for lamps for lighting bridge by electricity from underground connections; estimated cost \$224,000; Wilbur J. Watson, Cleveland, O.; Charles E. Bolling, City Engineer, and C. P. E. Burgwyn of Richmond comprised Board of Engineers for selection of plans. (Recently mentioned.)

### CLAYWORKING PLANTS

Ga., Macon.—Sewer Pipe.—Bibb Sewer Pipe Co. incorporated with \$50,000 capital stock by O. J. Massee, Jr., J. P. Stetson and A. S. Bates.

Ky., Hopkinsville.—Brick.—Dalton Bros. Brick Co. incorporated with \$50,000 capital stock by George D. Dalton, Monroe Dalton and G. E. Dalton; will succeed Dalton Bros.

S. C., Drake, R. F. D. from Bennettsville.—Brick.—Drake Brick & Tile Co. incorporated with \$2500 capital stock by W. B. Drake and J. P. Tart, Blenheim, S. C., and J. A. Drake, Bennettsville, S. C.

Tex., Greenville.—Brick.—Greenville Press Brick Co. will erect fireproof building and install machinery; daily capacity, 3000 bricks; organization of company not complete. (Recently reported incorporated with \$20,000 capital stock by S. A. Noble, Melvin Kimbrough and W. H. James.)

W. Va., New Cumberland.—Fire-brick.—Freeman Fire-Brick Co. incorporated with \$30,000 capital stock by G. L. Bambrick of New Cumberland, William Barfield of Follansbee, W. Va., and others.

### COAL MINES AND COKE OVENS

Ala., Birmingham.—Bryan Coal Corporation chartered with \$600,000 minimum and \$1,000,000 maximum capital stock; purchased 8000 acres of mineral land in Jefferson and Walker counties, Alabama, from estate of Joseph Bryan of Richmond, Va.; several coal operations now on lands; further developments planned; president, Frank Nelson, Jr., Birmingham; secretary-treasurer, George Cole Scott, 707 Mutual Bldg., Richmond, Va. (Mr. Nelson previously reported as organizing company for this development.)

Ky., Madisonville.—Coll Coal Co., W. D. Coll, general manager, awarded contract to Evansville (Ind.) Construction Co. to sink 275-foot shaft, both cage and air, on Dan Davis Addition.

Ky., Paducah.—West Kentucky Coal Co., Sturgis, Ky., will rebuild burned property at Paducah, which was owned by E. Farley and recently reported burned.

Ky., Prestonsburg.—Otter Coal Co. incorporated with \$10,000 capital stock by W. L. Gentry, E. E. Williams, Paul W. Scott and others, all of Huntington, W. Va.

Miss., Greenville.—John B. Scruggs Coal Co. incorporated with \$5000 capital stock by W. S. Scruggs, John B. Scruggs, Jr., and others.

W. Va., Buchanan County.—Big Ax Pocahontas Coal Co., 406 Fisher Bldg., Chicago, Ill., purchased from J. F. Rison and associates tract of coal and timber land in Buchanan county for \$360,000; reported to develop. (Mr. Rison recently incorrectly noted, under Danville, Va., as purchasing this land.)

W. Va., Lewisburg.—Lanark Coal Co. incorporated with \$10,000 capital stock by John B. Laing of Lewisburg, Thomas H. Laing, John Burns, C. H. Rogers and M. Stafford of Beckley, W. Va.

W. Va., Springfield.—Camp Creek Coal & Lumber Co. incorporated with \$150,000 capital stock by A. D. Harrah, J. J. Melton, M. A.

Harrah, W. E. R. Bryan and Walton C. Hardy, all of Charleston, W. Va.

W. Va., Twin Branch.—J. B. B. Coal Co. is consolidation of coal-mine interests of Jewett, Bigelow & Brooks in Pocahontas field; capital stock, \$500,000; H. M. Jewett, president, Detroit, Mich.; Edward Page, vice-president, Boston, Mass.; Robert Grant, treasurer, Boston; W. R. Ballantine, secretary, Boston; J. W. Bigelow, general manager, Twin Branch; production of mines to be increased within next few months to probable basis of over 1,000,000 tons annually. (Previously noted incorporated.)

### CONCRETE AND CEMENT PLANTS

Md., Baltimore.—Schurb Concrete Corporation incorporated with \$600,000 capital stock by Harry M. Lindsay, 112 N. Paca St.; S. H. Moore, J. Edward Tyler, Jr., and others; will continue present business.

Mo., Springfield.—Concrete Posts.—Springfield Concrete Post Co. increased capital stock from \$50,000 to \$200,000.

### COTTON COMPRESSES AND GINS

N. C., Newton.—Newton Oil & Fertilizer Co. incorporated with \$50,000 capital stock by J. B. and R. A. Little and others.

N. C., Rockingham.—M. L. Hinson will erect 6 cotton gins with capacity of about 90 bales daily; also erect fertilizer-mixing plant with capacity of 100 tons daily; later contemplates erecting cottonseed-oil mill.

Tex., Bay City.—Ben Gardner, Glen Flora, Tex., will erect cotton gin.

Tex., Mercedes.—S. M. Williams, Kansas City, Mo., will erect cotton gin, to be equipped with either four or six gin stands; cost \$6000 to \$8000.

Tex., Stowell.—Elmen Realty Co., Houston, Tex., awarded contract to J. M. Neil, Houston, Tex., for erection of cotton gin.

Va., Stony Creek.—E. L. Lee contemplates rebuilding burned cotton gin.

### COTTONSEED-OIL MILLS

Ga., Thomasville.—F. D. Hoskins, Conyers, Ga., is considering establishment of cottonseed-oil mill.

S. C., Walterboro.—Walterboro Cotton Oil Co., J. B. Liles, president, will install one hydraulic press equipment complete; recently noted. (See "Machinery Wanted.")

Tenn., Memphis.—Buckeye Cotton Oil Co., Cincinnati, O., awarded contract to T. C. Thompson & Bros. of Birmingham, Ala., to erect buildings for cotton-oil mill; contract about \$80,000. (Lately mentioned.)

### DRAINAGE AND IRRIGATION

La., Adeline.—Canal to be constructed by Cypressport Drainage Board, W. F. Giles, secretary, will be as follows: Canal to have 30-foot bottom for 14,600 feet, with side slopes one foot vertical to one foot horizontal, yardage about 69,587 cubic yards; 11,575 feet to have same slopes, with 30-foot bottom, 50,412 estimated yardage; some blasting. (Bids recently noted to be received April 15.)

La., St. Bernard Parish.—A. L. Arpen, Eau Claire, Wis., and associates purchased 18,000 acres of marsh lands; will reclaim and divide into small farms.

Tex., Brownsville.—West Brownsville Canal Co. incorporated with \$25,000 capital stock by J. B. Scott, S. C. Tucker, J. G. Fernandez and L. H. Hallem.

Tex., Pecos.—Goedeker & Brock, representing Gold Bond Land Co., will develop Cowan Springs and provide water for irrigation; plan is to construct canals 20 feet deep, 10 feet wide at base, 20 feet at top, with total length of  $\frac{1}{2}$  to  $\frac{3}{4}$  of mile.

### ELECTRIC LIGHT AND POWER

Ala., Troy.—Standard Chemical & Oil Co., Fox Henderson, president, will construct electric plant developing 1400 horsepower to operate two mills; probably locate at company's new mill, two miles from Troy, and transmit electricity from there to old mill, one mile from city; all machinery will be in duplicate and triplicate, and different machines in both mills will be equipped with individual motors; contracts awarded for equipment and supplies.

Fla., Jacksonville.—Electrical Committee of Board of Bond Trustees awarded six contracts, aggregating \$145,822, for furnishing following equipment to be installed in elec-



tric-light and power station: 20-ton electric crane, 4 boilers, rebuilding of 4 boilers and removal of old ones, 3 condensers for service equipment (complete) and replacing auxiliaries of 2 other equipments, feed-water heater, 2 boiler-feed pumps, 4 duplex service pumps and 2 duplex piston oil pumps and necessary brass plungers, 2 1500-kilowatt turbo-generators and 2 100-kilowatt turbo-exciters; W. M. Bostwick, Jr., chairman of committee. (Call for bids recently noted.)

Ga., Colquitt.—City voted issuance of \$22,000 of bonds for erection of electric-light plant, etc. Address The Mayor. (See "Water-works.")

La., Homer.—Town Council is considering purchase of electric-light plant owned and operated by Edward Sawyers. Address Town Clerk.

Mo., Kansas City.—Costelow-Canham Electric Co. incorporated with \$300,000 capital stock by John F. Costelow, E. E. Canham, Jr., and E. E. Canham, Sr.

Oklahoma, Okemah.—W. H. Dill will construct hollow concrete dam costing \$40,000 to \$50,000; to develop power for transmission by electricity; location at falls seven miles west of Okemah.

Oklahoma, Helena.—Town has issued \$10,000 of light bonds; L. A. Ruley, Town Clerk.

Oklahoma, Roswell.—Town has, it is reported issued \$35,000 of bonds for installation of electric-light plant and construction of water works. Address Town Clerk.

Tenn., Lenoir.—Lenoir Light & Power Co. incorporated with \$10,000 capital stock by T. C. Foster, J. R. Browder, H. C. Foster, J. E. Foster and S. P. Witt.

Tex., Hubbard City.—Union Central Light & Ice Co., Wm. A. Bass, president and manager, is proceeding with installation of additional equipment, consisting of 250-horse power automatic engine, generator direct connected and 250-horse-power boiler; time of completion of betterments to cover about six months; fuel oil burner system to be installed, motor driven, to pump oil from storage tanks; improvements to cost \$25,000; all contracts awarded. (Previously noted.)

Tex., Tulla.—City voted issuance of \$25,000 of bonds for construction of electric-light plant and water-works. Address The Mayor.

Va., Clarendon.—Arlington Electric Co. incorporated with \$200,000 capital stock by M. E. Church, president, Falls Church, Va.; L. L. Northrup, secretary, and E. Wiley Stearns, treasurer, both of Clarendon; will purchase electric current, erect lines and transforming stations, and distribute current for light, heat and power in Alexandria and Fairfax counties, Virginia.

Va., Ivanhoe.—Carter Iron Co., Park Bldg., Pittsburg, Pa., will construct dam 20 feet high to develop 3300 horse-power for transmission by electricity to operate iron furnaces, for mining and railway, for lighting, etc.; company will undertake construction; cost not estimated.

Va., Newport News.—City will vote on issuance of \$150,000 of bonds for construction of electric-light plant. Address The Mayor.

### FERTILIZER FACTORIES

Ala., Cullman.—Union Fertilizer Co. has organized with G. W. Burdick president, F. J. Buckman vice-president, C. O. Jaggars secretary, W. D. Rhea treasurer; will operate fertilizer plant; has buildings. (Recently reported incorporated with \$30,000 capital stock.)

N. C., Newton.—Newton Oil & Fertilizer Co. incorporated with \$50,000 capital stock by J. B. and R. A. Little and others.

N. C., Rockingham.—M. L. Hinson will erect fertilizer-mixing plant with capacity of 100 tons daily. (See "Cotton Compresses and Gins.")

### FLOUR, FEED AND MEAL MILLS

Mo., Kansas City.—United States Stock Food Co., 207 Midland Bldg., awarded contract to George H. Siedhoff, Kansas City, for erection of four-story 48x52-foot mill building, one-story 33x20-foot engine-room and one-story 42x100-foot warehouse; mill and power-house to be concrete and fireproof construction; warehouse of corrugated iron; plans by Smith, Rea & Lovitt, Kansas City; daily capacity 120 tons of alfalfa, grain and stock feed. (Recently noted.)

Tex., Brenham.—William Seldel will open bids July 1 for erection of grist mill; 20x105 feet; brick; cost \$3000; cost of machinery \$5000. (See "Machinery Wanted.")

Va., Leesburg.—W. S. Perkins will improve flour mill and increase capacity to 150 barrels; contract awarded to W. V. Moore, West Falls Church, Va.

### FOUNDRY AND MACHINE PLANTS

Ark., Stuttgart.—Castings.—Commercial Club has completed arrangements for establishment of machine shop and foundry to manufacture castings from smallest bolt to parts weighing several hundred pounds.

Ga., Moultrie.—Stumping Machines.—Eureka Stumping Machine Co. (recently reported incorporated with \$5000 capital stock) has organized with H. L. Harrell, president; John W. Smith, vice-president; J. T. Burgess, secretary-treasurer; B. F. Bruton, manager; will have castings manufactured by contract. (See "Machinery Wanted.")

Ky., Louisville.—Eagle Casting Co. increased capital stock from \$30,000 to \$60,000.

Miss., Vicksburg.—Iron Foundry and Garage. B. J. Robinson Machine Works, B. J. Robinson, proprietor, will open bids at once for erection of combined iron foundry and garage; 75x50 feet; fireproof construction; plans by W. H. Stanton, Vicksburg. (Recently noted.)

Mo., St. Joseph.—Pumps.—Meyers Pump & Manufacturing Co. incorporated with \$60,000 capital stock by David W. Hall, William M. Meyers and Michael M. Garver.

N. C., Biscoe.—Iron and Brass.—Biscoe Foundry & Machine Co.'s plant (leased and operated by C. E. Kellam) will be rebuilt by owners, who will erect 30x40-foot foundry and 30x70-foot machine shop of sheet-iron construction; building contract not let; building-material bids to be addressed to J. R. Page, care of owners; bids on supplies to Mr. Kellam.

Tenn., Knoxville.—Stoves.—Knox Store Works incorporated with \$100,000 capital stock by H. W. Sanford, A. B. Day, A. F. Sanford, W. C. Ross and G. W. Griggs; will expend \$30,000 to erect three buildings; mill construction; plans by company; cost of machinery (purchased) \$35,000; organization of company not complete. (Previously noted.)

W. Va., Martinsburg.—Refrigerating Plants, etc.—Rothwell & Co. incorporated with \$150,000 capital stock by J. M. Rothwell, K. L. Rothwell, J. W. Gatrell and others.

W. Va., Wheeling.—Furnace.—Wheeling Mold & Foundry Co. will build second 20-ton acid open-hearth furnace, doubling its capacity for manufacturing steel castings; 150x59 feet erecting shop, concrete on metal lath; contractor, S. R. Smythe & Co., Pittsburg, Pa.

### GAS AND OIL DEVELOPMENTS

Ark., Booneville.—Booneville Oil & Gas Co. incorporated with \$200,000 capital stock; S. J. Jewell, president; Irvin Lyman, vice-president; H. G. Murphy, secretary-treasurer.

Ala., Fayette.—Providence Oil & Gas Co., Frank Nelson, Jr., president, Birmingham, Ala., contemplates increasing capital stock to \$1,250,000; now operating three wells, has four under contract, and will probably let contract within 30 days for five additional wells; contemplates piping gas to Birmingham (65 miles), Columbus, Miss. (40 miles), and Tuscaloosa (30 miles). (Previously noted and incorrectly reported to have awarded contracts for drilling nine additional wells.)

La., Shreveport.—Busch-Everett Company will increase capital stock from \$1,500,000 to \$5,000,000; has 300,000 acres land, six producing oil wells and gas wells; plans further oil developments; main offices at St. Louis, Mo.

Oklahoma, Tulsa.—Chestnut Oil Co. incorporated with \$10,000 capital stock by E. F. Blake, F. R. Crowell and Albert Brown.

Oklahoma, Tulsa.—Savannah Oil Co. incorporated by W. D. Abbott, R. A. Josey and L. L. Greer.

Tenn., Memphis.—Memphis Natural Gas & Oil Co. increased capital stock from \$200,000 to \$300,000.

Tex., Beaumont.—Maverick County Oil Co. incorporated with \$30,000 capital stock by J. S. Wheelless, W. D. Gordon and B. Denster.

W. Va., Huntington.—Combine Oil & Gas Co. incorporated with \$25,000 capital stock by S. J. Hyman, C. T. Taylor, L. L. Wilson and others.

W. Va., Williamson.—Burning Creek-Marrowsbone Land Co. incorporated with \$100,000 capital stock by John A. Sheppard, Wells Goodykoontz and Harry Scherr; proposes to develop about 5000 acres land; company has two plans in view, one being to pipe gas to Williamson (15 miles) for city supply; other plan to establish carbon-black factory; proposes to use six-inch gaspipe; not ready to announce date for receiving bids.

### ICE AND COLD-STORAGE PLANTS

Fla., New Smyrna.—Consumers' Ice, Light & Power Co. will establish ice plant with daily capacity of five tons.

Fla., Ocala.—George MacKay, Ocala, is preparing plans for ice and cold storage plant; reinforced concrete construction; galvanized metal roof; cost \$12,000.

Tex., Jacksboro.—Hensley Bros. will erect ice plant with capacity of 21 tons per day.

Tex., San Antonio.—Merchants' Ice & Cold Storage Co., Starr and Willow Sts., will enlarge and improve plant, expending about \$100,000.

Va., Altavista.—J. T. Jennings contemplates establishment of ice plant. (See "Machinery Wanted.")

W. Va., Parkersburg.—A. J. B. Ice & Storage Co. incorporated with \$50,000 capital stock by W. F. Thayer, Robert Wilson, Edgar A. Vaughan, W. Legan and others.

### LAND DEVELOPMENTS

Ala., Birmingham.—East Woodward Land Co. incorporated with \$20,000 capital stock; J. H. Taylor, president; J. F. George, vice-president; S. H. Shearer, secretary-treasurer.

Fla., Tampa.—Co-operative Homestead Co. has following officers: President, C. S. Emery of Toledo, O.; vice-president, R. W. Burke of Manitowoc, Wis.; treasurer, Alfred Allen of Toledo, O.; secretary, A. B. Hawk, 1015 Franklin St., Tampa; will develop 24,000 acres land in Hillsboro and Pasco counties. (Recently noted.)

Fla., Tampa.—Thomas Land Co., recently reported incorporated, is subsidiary to and organized to construct building for occupancy of Tampa Hardware Co. (See "Stores.")

Ga., Leary.—Edward J. Willingham and B. P. O'Neal, Macon, Ga., purchased 5000 acres and will for present conduct farm; later plan to divide property into lots and colonize.

La., Lake Charles.—Edgewood Land & Logging Co. sold to foreign capitalists 3500 acres of cut-over pine land; development in charge of E. F. McCrosset, engineer, Birmingham, Ala.

La., New Iberia.—Teche Land Co., with \$30,000 capital and office in New Iberia, has purchased land (part of Joe Jefferson estate) recently noted sold to Andrew Stafford and others; will probably divide 30 acres into 100 lots; improvements will include 5000 feet three or four-foot-wide pavement; addition to be called Jefferson Place. Andrew Stafford is president of company; I. D. Stafford, vice-president; Geo. P. Lane, secretary and manager; Alfred Renouet, treasurer.

La., New Orleans.—Pointe Coupee Land & Improvement Co. incorporated with \$50,000 capital stock; Samuel R. Ely, president; Walter C. Wright, vice-president; William Andrew Collins, secretary-treasurer.

Md., Hancock.—Archibald R. Shafer, 3 Abell Bldg., Baltimore, Md., purchased 1500 acres in Western Maryland, between Hancock and Cumberland; contemplate developing for apple orchard.

Miss., Hattiesburg.—Mississippi Colonization Association will be incorporated with \$250,000 capital stock to develop and colonize 100,000 acres of cut-over pine land. H. A. Camp is trustee.

Miss., Wiggins.—Mississippi Farms Co. is proceeding with its proposed land developments; disposing of agricultural land and locating farmers; owns various lands, but principal holdings are about 25 miles from Gulf of Mexico, near Gulfport; is opening up three new towns—Clarence, Powers and Sarto; has nurseries and demonstration farms at Wiggins; president, W. E. Guild of Green Bay Lumber Co., Des Moines, Iowa; secretary-treasurer, Robert H. Finkbine of Finkbine Lumber Co., Wiggins; sales manager, G. A. McColium of Wiggins; offices at Wiggins, in Fleming Bldg. at Des Moines, and in Commercial National Bank Bldg., Chicago, Ill.

Tex., Nacogdoches.—William B. McClure, Chicago, Ill., purchased 16,000 acres of cut-over pine lands in Nacogdoches and Rusk counties for \$48,000 and will colonize.

Tex., San Antonio.—Taylor-Fowler Land Co. incorporated with \$10,000 capital stock by Charles G. Taylor, Frank D. Fowler and W. H. Chambers.

Va., Norfolk.—Money Point Land Corporation, Fergus Reid, president, Box 223, has acquired tract of land on Southern Branch of Elizabeth River in Norfolk county and will develop for manufacturing sites; plans not fully determined. (Previously reported incorporated with \$50,000 capital stock.)

Va., Richmond.—Alleghany Land Co. incorporated with \$15,000 capital stock; J. T. McAllister, president, Hot Springs, Va.; E. P. Cox, vice-president, and L. F. Cary, secretary-treasurer, both of Richmond, Va.

W. Va., Fairmont.—Acme Land Co. incor-

porated with \$25,000 capital stock by R. T. Cunningham, C. E. Smith, G. M. Alexander and others.

### LUMBER MANUFACTURING

Ala., Panola.—T. H. Read & Co. will install additional sawmill.

Ark., Crittenden County.—Atlas Hardwood Lumber Co., Memphis, Tenn., purchased 4000 acres of timber land for \$100,000.

Ark., Glenason.—Freeman Lumber Co. will rebuild sawmill recently reported burned at loss of about \$50,000; G. H. Lowery, Kansas City, Mo., is secretary-treasurer.

Ga., Boston.—Kirby Planing Mill Co., E. M. Smith, president, will erect sawmill and brick drykiln; daily capacity, 20,000 feet of timber; will install timber sizer for dressing timber. (Recently noted.)

Ga., Hawkinsville.—Weatherly Lumber Co. organized with \$16,000 capital stock by F. M. Mangham, E. J. Henry, L. A. Jordan, H. F. Lawson and others.

Ga., Waycross.—C. J. Haden, Atlanta, Ga., purchased 19,000 acres of land in Ware county, and may develop for milling and turpentine purposes.

La., Merryville.—American Lumber Co. acquires C. L. Smith Lumber Co. of Merryville and mill, etc., of Orange (Tex.) Lumber Co.; will remove Orange mill to Merryville and rebuild; plans extension of tramways; will cut timber from 45,000 acres land in Calcasieu parish, this land being holdings of Wm. M. Rice Institute of Houston, Tex.; RiceLand Lumber Co. and American Lumber Co. were reported recently as incorporating (each with \$1,000,000 capital stock) under plans for Rice land development; president of American Lumber Co. is J. M. West of Houston; vice-president is Sam Park of Beaumont, Tex.

La., McElroy.—Ascension Red Cypress Co., Whitney-Central Bldg., New Orleans, La., may install planing mill in July.

La., New Orleans.—International Railway Tie Co. incorporated with \$300,000 capital stock; Luke S. Boudreaux, president; Joseph C. Telotte, vice-president; Robert J. Perkins, secretary, and William Dews, Jr., treasurer.

Miss., Columbia.—Hill Hardwood Co. increased capital stock from \$10,000 to \$30,000.

Miss., Gunnison.—Brookhart-Clouse Lumber Co. incorporated with \$10,000 capital stock by A. M. Brookhart and L. C. Clouse.

Miss., Pachuta.—Mr. Mayerhaff, Arundel (P. O. Meridian), Miss., purchased timber land and will develop; will remove sawmill from Arundel.

Mo., St. Louis.—Stephen J. Gavin Lumber Co. incorporated with \$50,000 capital stock by Stephen J. Gavin, Julia A. E. Gavin and Katherine J. Gavin.

Tenn., Chattanooga.—McLean Lumber Co. will rebuild plant recently reported burned.

Va., Emporia.—W. S. Goodwin of Emporia, Harry Schwartz of Richmond, Va., and others contemplate erecting veneering plant.

W. Va., Danville.—Big Ax Pocahontas Coal Co., Chicago, Ill., purchased tract of coal and timber land in Buchanan county; price \$300,000. (See "Coal Mines and Coke Ovens.")

W. Va., Pecks Mill.—Mill Creek Lumber Co. incorporated with \$25,000 capital stock by George Minister of Pecks Mill, Henry K. Schocke, Sarah J. Schocke and Henry Minister, all of Chillicothe, O.

W. Va., Springtown.—Camp Creek Coal & Lumber Co. incorporated by A. D. Harrah, Charleston, W. Va., and others.

### METAL-WORKING PLANTS

La., New Orleans.—Cornices, Fireproof Doors, etc.—Pelican Metal & Roofing Co., Chas. Bilbe, president, 333 Howard Ave., has purchased site and will erect 100x100-foot one-story factory for increasing business; manufactures galvanized-iron and copper cornices, ventilators, fireproof windows, smokestacks, tanks, etc. (See "Machinery Wanted.")

### MINING

Ky., Soldier.—Asphalt Rock.—J. W. Shumate of Soldier and S. M. Bradley, Morehead Ky., contemplate development of natural asphalt rock deposits; field covers 600 acres, and is reported to contain 5,000,000 tons of mineral.

Mo., Joplin.—Lead and Zinc.—American Zinc, Lead & Smelter Co., H. S. Kimball, president, Plattville, Wis., purchased 640 acres lead and zinc land; will develop and build mill.

Mo., Neosho.—Hoover Milling Co. (controlled by George Moore, Chicago, Ill., and associates) will reopen old Moseley mines and erect 150-ton ore mill; H. C. Braymer,

civil engineer, is making surveys for mill and road.

N. C., Winston-Salem—Granite.—Blue Pearl Granite Co. has organized with R. M. Echols, president; J. L. Wimblish, first vice-president; P. H. Hanes, Jr., second vice-president; R. George Shackell, secretary; W. H. Clinard, treasurer; J. O. Bolodan, general manager, Barre, Vt.; owns 48 acres of blue pearl granite and will acquire plants of Consolidated Granite Co. and McGilliard Company. (Recently reported incorporated with \$250,000 capital stock.)

Tenn., Nashville—Phosphate.—Kentucky-Tennessee Phosphate Co. has not announced details of proposed developments; Ed Strudwick (not Stridecock, as recently stated) of Richmond, Va., is president; Robin Jones, 14 Steger Bldg., Nashville, is secretary. (Lately reported incorporated with \$500,000 capital stock.)

Tex., Fayetteville—Gravel.—Frnk-Kickler Gravel Association organized with J. V. Frnk general manager, J. O. Tanner plant manager, and Charles Knoblick manager of Houston (Tex.) office; will invest \$15,000 to \$20,000 for machinery.

### MISCELLANEOUS CONSTRUCTION

La., New Orleans—Wharf.—Dock Board ordered that specifications be altered for New Orleans & Northeastern Railroad wharf at Press St., in accordance with suggestions made by J. F. Coleman, consulting engineer; instead of wooden shed of ordinary type, as originally planned, improved iron shed will be erected and extra piling driven, so as to permit of installing banana conveyors to handle fruit from vessels at wharf; width of wharf for space of about 400 feet, that covered by conveyors, will be about 50 feet instead of 90 feet, as originally proposed.

La., New Orleans—Shed.—Commissioners Port of New Orleans awarded contract to John Bress of New Orleans at \$10.40 per cubic yard for construction of concrete piers for W. A. Kernaghan shed.

N. C., Waynesville—Lake.—Southern Assembly, Rev. James Cannon, general superintendent, will construct lake covering 300 acres in connection with development of religious educational assembly; earth dam with concrete core wall and spillway; length on W. L., 650 feet; length on crest, 200 feet; height, 45 feet; embankment, 125,000 cubic yards; concrete, 10,000 cubic yards; will develop 200 horse-power electrically and furnish light and power for buildings; will probably advertise for bids during April; J. W. Seaver, chief engineer, Waynesville, (Previously described under "Land Developments, etc.")

S. C., Columbia—Filling.—Seaboard Air Line Railway, W. L. Seddon, chief engineer, Portsmouth, Va., will, it is reported, award contract to Lane & Co., Atlanta, Ga., for filling in trestle cuts, aggregating about 280,000 square yards.

S. C., Fort Moultrie—Channel.—Government will construct channel in vicinity of White Stake light, northwest of Sullivan's Island; bids received until April 27. Address Constructing Quartermaster. (See "Machinery Wanted.")

### MISCELLANEOUS ENTERPRISES

Ala., Birmingham—Newspaper Plant.—Birmingham Ledger Co., James J. Smith, president, awarded contract to Realty Construction Co., Birmingham, for erection of previously-noted building to cost \$200,000; 50x100 feet; 14 stories, 2 below level, 12 above; steel frame; hollow-tile floor construction; direct steam heat; electric power, 220-volt service; electric lights, 110-volt; building located 21st St. and First Ave.; plans by Wm. L. Welton, Empire Bldg., Birmingham. (See "Machinery Wanted.")

Ala., Brewton—Garage.—O. F. Luttrell will erect brick garage.

Ark., Arkadelphia—Navigation.—Arkadelphia Packet Co. organized with \$20,000 capital stock to promote navigation on Ouachita River; R. W. Huie, president; James H. Abraham, vice-president; E. Nowlin, traffic manager; J. E. Callaway, secretary-treasurer.

Fla., Jacksonville—Naval Stores.—Operators Naval Stores Co. organized with J. A. Cranford president, H. W. Clark secretary-treasurer, both of Jacksonville; J. J. Haymans, Gainesville, Fla., and J. J. Phillips, South Jacksonville, Fla., vice-presidents; capital stock, \$250,000.

Ga., Douglas.—Matthews Tie Co. contemplates installation of creosoting machinery. (See "Machinery Wanted.")

Ga., Rome—Automobiles.—Rome Motor Car Co. incorporated with \$10,000 capital stock by Arthur R. S. Sullivan and H. G. Bowie.

Ga., Savannah—Hammocks, etc.—Papooskin Company (recently reported incorporated by John E. All and others) states capital stock is \$5000, with privilege of increasing to \$50,000; original stockholders are W. H. Conner, 511 Bolton East; Judge Henry McAlpin and others; will manufacture baby hammocks, mattresses, etc. (See "Machinery Wanted.")

La., New Orleans—Automobiles.—Chalmers Motor Co. incorporated with \$20,000 capital stock; William J. Johnston, president, and William P. Parkhouse, vice-president and treasurer.

La., New Orleans—Electrical Appliances.—Ed Sprangley Electric Co. incorporated with \$25,000 capital stock; Edward Sprangley, president; S. B. Swift, manager and secretary; A. W. Lewin, treasurer.

Md., Baltimore—Laundry.—Home Laundry Co., 235 S. Clinton St., incorporated with \$10,000 capital stock by Joseph Lotz, Mary A. Lotz and Edmund O'Brien; continue established plant.

Md., Baltimore—Printing, etc.—Fink-Guyes Company, 607 W. Baltimore St., incorporated with \$10,000 capital stock by Abraham J. Fink, Max I. Guyes and Harold Tschudi.

Miss., Decatur—Hardware.—Decatur Hardware Co., incorporated with \$10,000 capital stock by R. S. Smith, R. F. Massey and associates.

Miss., Iuka—Publishing.—Tishomingo County News Publishing Co. incorporated with \$5000 capital stock by J. C. Jourdan, F. T. Carmack, W. L. Elledge and J. J. Chambers.

Mo., Elvins—Publishing.—Lead Fields Publishing Co. incorporated with \$10,000 capital stock by Pollite Elvins, Carr Hartshorn and Henry Davis.

Mo., Excelsior Springs—Mineral Water.—General Realty & Mineral Water Co. incorporated with \$50,000 capital stock by J. E. Lunderstrom, S. W. Henderson and R. A. Postelwaite.

Mo., Springfield—Contracting.—Schlifer Stone & Contracting Co. incorporated by Geo. Schlifer, H. B. McDaniel and M. A. Rathbone.

Mo., St. Louis—Automobiles.—Continental Motor Equipment Co. incorporated with \$25,000 capital stock by Noble H. Davis, John Shuford and H. S. Gilbert.

Mo., St. Louis—Dyeing and Cleaning.—Yawitz Dyeing & Cleaning Co. incorporated with \$2500 capital stock by Samuel Yawitz, Louis O. Tobias and Joseph J. Yawitz.

Mo., St. Louis—Construction.—Olson-Schmidt Construction Co. incorporated with \$5000 capital stock by Edward Polson, Hilma C. Olson and Oscar H. Schmidt.

Mo., St. Louis—Laundry.—Empress Laundry Co. incorporated by Charles F. J. Dietrich, Herbert E. Spielman and Preston J. Spielman.

Mo., St. Louis—Publishing.—Aero Publication Co. incorporated with \$5000 capital stock by E. Percy Noel, Ralph E. Mooney, George C. Mackay and Howard W. Gill.

N. C., Asheville—Laundry.—Mountain City Laundry, F. M. Weaver, president, awarded contract to J. W. Duckert for erection of 45x70-foot brick addition to laundry; plans by T. E. Davis. (Recently noted.)

N. C., Mission, R. F. D. from Mt. Pleasant—Hardware.—Mission Hardware Co. incorporated with \$10,000 capital stock by M. P. Crayton, M. F. Crayton and H. D. Crayton.

N. C., Oak Ridge—Garage.—Southern Automobile College has plans by F. L. Bonfoey, Charlotte, N. C., for garage; 40x80 feet; mill construction; pressed steel (imitation brick) sides; metal shingle roof; electric lighting; cost \$2500; day labor. (See "Machinery Wanted.")

S. C., Camden—Laundry.—Chamber of Commerce is interested in proposed organization of company to establish steam laundry; capital stock \$4000. (See "Machinery Wanted.")

S. C., Greenville—Laundry and Dry-cleaning Plant.—Company will be incorporated with \$50,000 capital stock by H. W. Therman and others to establish laundry and dry-cleaning plant.

Tenn., Chattanooga—Park.—City will petition Legislature for authority to issue \$250,000 of bonds for parks and playgrounds; R. S. Faxon, chairman City Park Commission.

Tenn., Mt. Pleasant—Automobiles.—Mt. Pleasant Auto & Machine Co. incorporated with \$5000 capital stock by Ernest Irwin, Percy S. Chandler, J. A. English, Ernest Kittrell and A. W. Craig.

Tex., Columbus—Publishing.—Colorado Citizens Publishing Co. incorporated with \$5000 capital stock by O. A. Zumwalt, George Gegenworth and H. C. Mitchell.

Va., Petersburg—Police Patrol System.—

Common Council decided to purchase signal-phone police patrol system; R. D. Budd, City Engineer.

W. Va., Clarksburg—Garage.—Monticello Automobile & Garage Co. (recently noted incorporated with \$100,000 capital stock) will erect fireproof building about 75x200 feet; D. W. Jacobs, president; C. E. Prunty, vice-president; Arthur Parsons, secretary; Hugh Jarvis, treasurer; John W. Jacobs, manager.

W. Va., Hinton.—Pyles Fuel Co. incorporated with \$10,000 capital stock by G. W. Pyles, M. O. Pyles, O. E. Houchins, R. F. Dunlap and others.

W. Va., Sistersville—Garage.—Tyler Motor Co. incorporated with \$5000 capital stock by L. H. Talbott, W. E. West, E. A. Burham, H. W. McCoy and Geo. F. Durham.

W. Va., Wheeling—Glass Ware.—Wheeling Tumbler Co. incorporated with \$75,000 capital stock by Henry W. Turner, J. H. Fox, E. O. Smith and others.

### MISCELLANEOUS FACTORIES

Ala., Birmingham—Macaroni.—Birmingham Macaroni Co., recently stated to have increased capital stock from \$30,000 to \$50,000, will erect addition to plant costing about \$20,000; new structure will be 100x140 feet, brick, three stories; enlarged plant will have capacity of 15,000 pounds of macaroni.

Ala., Cullman—Aeroplanes.—National Aerial Navigation & Equipment Co. incorporated with \$125,000 capital stock; Fred J. Buchanan, president; L. N. Buell, secretary; George Steffelmeyer, treasurer; Fred L. Schaulfer, manager.

Fla., Largo—Bakery.—August McMillen will erect bakery; construction begun.

Fla., Orlando—Medicines.—Pineacura Remedies Co. incorporated with M. O. Overstreet, president; H. Drew, vice-president; H. A. Grant, secretary-treasurer.

Fla., Tarpon Springs—Cigars.—M. Stachelberg & Co., Edgar J. Stachelberg, president, Tampa, Fla., awarded contract for three-story \$30,000 factory recently noted.

Fla., Tampa—Cigars.—Ron-Macdonald Cigar Co. incorporated with \$50,000 capital stock by Francisco A. Ron of Tampa, Scott Macdonald and Albert C. Wandrei, both of St. Paul, Minn.

Ga., Savannah—Papooskins.—The Papooskin Co. incorporated with \$5000 capital stock by U. H. McLaws and others to manufacture papooskins—new kind of hammock or bed.

Ky., Glasgow—Distillery.—Beechwood Distillery incorporated with J. P. Price, president; T. B. Pedigo, treasurer, Louisville, Ky.; Paul D. Trigg, secretary; J. S. Long, general manager.

Ky., Louisville—Ice-cream.—Velvet Tip Ice-Cream Co. incorporated by Henry Klotz, Frankie Klotz and F. C. Klotz.

Ky., Louisville—Electric Vehicles.—Electric Vehicle Co. incorporated with \$10,000 capital stock by Lee Miles, Edward Drummond, Philip Allison and H. B. Hewett to manufacture electric vehicles; proposes later to incorporate for larger amount and erect plant.

Ky., Louisville—Loose-leaf Files.—Webster Loose-leaf Filing Co., 605 Louisville Trust Co. Bldg., incorporated with \$85,000 capital stock by F. A. Yates, H. W. Davis and Bradford Webster; Mr. Webster, manager; officers to be elected June 1; machinery and equipment installed for manufacture of binders and punches; daily capacity 1000 binders; needs materials. (See "Machinery Wanted.")

Ky., Versailles—Drugs.—Brown-Proctoria Drug Co. incorporated with \$10,000 capital stock by R. T. Young, R. S. Berryman and Ruth G. Berryman.

La., New Orleans—Brewery.—Union Brewing Co., Phil Foto, secretary-treasurer, 129 Decatur St., will increase capital stock from \$150,000 to \$200,000.

La., New Orleans—Automobiles.—Atlanta Motor Car Co., Clarence Houston, president, Atlanta, Ga., is reported to establish plant for manufacturing automobile trucks for commercial use; output for first year will be about 1000 cars; investment about \$300,000.

La., Shreveport—Glass.—Shreveport Window Glass Co. will be incorporated with R. R. Faulkner president, Indianapolis, Ind., to establish window-glass plant. (Recently mentioned.)

La., Shreveport—Glass.—August Boulenger, Brooksville, Pa., will establish glass factory.

Md., Baltimore—Perfumes, etc.—H. H. Erwin Company, 741 N. Central Ave., incorporated with \$5000 capital stock by Harry H. Erwin, Charles W. Wood and William M. McAllister.

Md., Baltimore—Umbrellas, etc.—Hollard, Sachs & Co. incorporated with \$50,000 capital stock by Moses Lazarus, 406 Laurens St.;

Solomon Sachs, Abraham J. Schriver and Addison B. Holland.

Md., Baltimore—Aeroplanes.—Baltimore Monoplane Co. has been incorporated with D. J. Carter, president, 2009 Boone St.; W. L. Anderson, vice-president, 911 N. Gilmer St.; Edward Wolfshelmer, secretary-treasurer, 710 Newington Ave.; establish plant for manufacturing aeroplanes; propose to build five machines equipped with parachute safety device. (Previously mentioned.)

Md., Creagerstown, R. F. D. from Rocky Bridge—Inks, Glue, Paste, etc.—P. A. Hann & Co. (recently noted to rebuild factory) will erect 3-story 24x40-foot building of ordinary construction; plans by G. M. Clemm, Keyser, W. Va.; R. C. Miller, construction engineer; plant will manufacture glue, inks, mucilage, tooth and library pastes, and toilet cream and blueing. (See "Machinery Wanted.")

Md., Midland—Shirts.—Midland Shirt Co. organized with William B. Phillips president and Lewis J. Ort secretary-treasurer, both of Midland.

Mo., Kansas City—Wheels.—Standard Spring Wheel Co., 407 Reliance Bldg., has leased building; will manufacture wheels; C. F. Underhill, president; T. J. Benkendorf, vice-president; H. W. McNutt, secretary-treasurer. (Recently reported incorporated with \$100,000 capital stock.)

Mo., St. Louis—Cigars.—Parker-Gordon Cigar Co. incorporated with \$100,000 capital stock by J. H. Parker, Jr., P. G. Gordon and W. W. Parker.

Mo., St. Louis—Car Stoppers.—Saunders Car Stopper & Equipment Co. incorporated with \$250,000 capital stock by D. R. Saunders of Columbia, Miss.; Lawrence Boswell, J. F. Bartman and S. T. Hatcher of St. Louis, and others, to manufacture corrugated car stopper for steam railways to replace present pumping posts.

Mo., St. Louis—Rock Drills.—Scott Gasoline Rock Drill Manufacturing Co. chartered with \$500,000 capital stock by Louis L. Scott, John R. Williams, Samuel D. Martin, Louis J. Winkler and others; will manufacture gasoline-driven rock drill invented by Mr. Scott.

N. C., Concord—Gas Plant.—Sydney Kenny of Kenny & Co., Philadelphia, Pa., contemplates establishment of gas plant.

N. C., Salisbury—Granite Works.—The Leland Company, W. W. Leland, president, 357 Fifth Ave., near 46th St., New York, will expend \$15,000 to \$20,000 to erect granite plant; 250 feet long; machinery and material purchased; construction begun. (Recently noted.)

N. C., Salisbury—Gas Plant.—Sydney Kenny of Kenny & Co., Philadelphia, Pa., has franchise to construct gas plant.

Okla., Muskogee.—Kellastone.—United States Kellastone Co. incorporated with \$50,000 capital stock by E. I. Newblock and R. Gee, J. M. Hays and I. M. Bee of Guthrie, Okla., and others.

Okla., Oklahoma City—Lime Works.—Oklahoma White Lime Co. incorporated with \$50,000 capital stock by E. L. Newblock and R. D. Conklin, both of Oklahoma City; Robert Galbreath, Tulsa, Okla., and others.

Okla., Oklahoma City—Jinger-Julep Co. incorporated with \$5000 capital stock by C. F. Grandy and R. V. Moran of Oklahoma City and C. M. Farr of Houston, Tex.

Okla., Oklahoma City—Oil Burners.—Oklahoma Oil & Burner Co., 23 N. Broadway, incorporated to manufacture and install patented burners for burning crude oil in furnaces; contemplates dealing in crude oil later; A. Morrison, president; W. F. Malone, vice-president; H. A. Bump, secretary-treasurer.

Tenn., Chattanooga—Tannery.—Robert Scholze Tannery Co. will erect addition; four stories; 150x50 feet; cost \$15,000.

Tenn., Memphis—Rice Mill.—Memphis Rice Mill Co., J. D. Mack, now of Crowley, La., manager, will be chartered with \$100,000 capital stock; secured site and will begin construction of mill within 10 days; erect 45x45-foot four-story mill building; also one and two-story warehouses 68x125 feet and 100x200 feet, respectively, of corrugated iron construction; also brick boiler and engine-house; mill to be equipped with machinery for daily capacity of 5000 bushels; cost of mill and warehouse approximately \$20,000.

Tenn., Memphis—Harness, etc.—Mohr Michael & Bros., Paducah, Ky., will establish plant for manufacturing saddles, harness and leather goods.

Tenn., Nashville—Medicine.—Home Medicine Co., Noel Block, increased capital stock from \$10,000 to \$50,000.

Tex., Harlingen—Ice-cream Factory.—William Hoffman will erect ice-cream factory.



Tex., Houston.—Coffee.—Guatemala Coffee Co., I. Rosenberg, president, purchased site 100x150 feet on which to erect three-story coffee-roasting plant; building will be fireproof; brick; equipment will include electric-gas roasting device; roasting plant to have capacity of 250 bags coffee daily; cost \$35,000 to \$40,000.

Tex., McKinney.—Soap.—Booster Soap Co. will establish plant to manufacture soap; daily capacity, 100 cases. (See "Machinery Wanted.")

Tex., McKinney.—Overalls and Cotton Shirts.—B. F. Johnson, secretary Commercial Club, is interested in establishment of factory for overalls and cotton shirts.

Tex., San Benito.—Sugar Mill.—San Benito Sugar Manufacturing Co. has contracted for nine-roller mill and crusher. (Previously noted organized.)

Tex., San Benito.—Sugar Mill.—San Benito Sugar Manufacturing Co. has contracted for additional machinery; plant will be 11-roller mill with capacity of 1000 tons daily, but will be so designed as to increase capacity to 4000 tons; capacity of cane juice per day will be 350,000 gallons. (Previously noted organized.)

Tex., Saratoga.—Saratoga Iron & Steel Co. incorporated with \$15,000 capital stock by Charles G. Hooks, H. L. Graham and W. P. Vick.

Tex., Temple.—Gas.—I. A. Walker, Dallas, Tex., petitioned City Council for gas franchise.

Va., Richmond.—Tanyard.—Bowen, Vaden & Utz incorporated with \$50,000 capital stock; B. A. Bowen, president; Clarence Vaden, vice-president; John E. Utz, secretary-treasurer.

Va., Norfolk.—Farm Implements.—Farm Implement Manufacturing Co. incorporated with \$25,000 capital stock; W. E. Land, president; L. S. Foster, vice-president; M. R. Land, secretary-treasurer.

Va., Richmond.—Tobacco.—R. A. Patterson Tobacco Co. (branch of American Tobacco Co., 11 Fifth Ave., New York) has purchased 10 acres of land; will at once commence erection of plant noted in December; buildings and machinery to cost about \$1,000,000; buildings for 650,000 square feet; capacity of plant, 30,000,000 pounds annually.

W. Va., Buckhannon.—Omega Gas Co. incorporated with \$24,000 capital stock by H. E. Young, French A. Sexton, Floyd P. Sexton, H. O. Talbott and O. B. Beier.

W. Va., Buckhannon.—Seed Cleaner.—Benson Manufacturing Co. incorporated with \$25,000 capital stock by O. B. Beer, W. L. Talbott, T. P. Sexton, A. Layfield and others; to control Benson's seed cleaner and rubber separator.

W. Va., Keyser.—Medicine.—Nesbiscera Company, 18 Main St., incorporated with \$25,000 capital stock; W. J. Koelz, president; E. V. Romig, vice-president; H. L. Arnold, secretary; T. T. Huffman, treasurer; Arza Furbee, manager; product manufactured by Baltimore chemists.

W. Va., Williamson.—Carbon Black.—Burning Creek-Marowbone Company contemplates establishment of carbon-black factory; capital stock, \$100,000; recently noted incorporated by John A. Sheppard, Wells Goodykoontz and Harry Scherr. (See "Gas and Oil Developments.")

## RAILWAY SHOPS, TERMINALS, ROUNDDOUSES, ETC.

Ga., Savannah.—Atlantic Coast Line Railroad, E. B. Pleasants, chief engineer, Wilmington, N. C., will, it is reported, expend \$300,000 in erection of roundhouse, turntable and offices at its yards south of Southover Junction.

La., New Orleans.—Illinois Central Railroad, A. S. Baldwin, chief engineer, Chicago, Ill., contemplates, it is reported, installing automatic signal and interlocking systems in vicinity of New Orleans at cost of about \$100,000.

La., Shreveport.—A. F. Rust, resident engineer Kansas City Southern Railway Co., Kansas City, Mo., may be addressed relative to erection of company's general repair shop; Waddell & Harrington, Kansas City (recently noted as construction engineers), are retained by company only as consulting engineers of all bridge work.

Md., Baltimore.—Maryland & Pennsylvania Railroad Co., J. S. Norris, general manager, North Ave. and Oak St., contemplates erection of freighthouse and other improvements; plans not determined.

Tenn., Memphis.—Memphis Union Station Co., J. Werners, chief engineer, awarded contract to Murch Bros. Construction Co., 516 Olive St., St. Louis, Mo., for erection of power and engine-house; 100x100x40 feet; fire-

proof construction; stock brick exterior; Bedford stone; all openings to have steel sash; cost \$50,000.

## ROAD AND STREET WORK

Ala., Decatur.—City will construct certain cement sidewalks, brick crosswalks and cement curbs provided for under improvement ordinance No. 31, series C; bids received until April 18; H. A. Skeggs, Mayor. (See "Machinery Wanted.")

Ala., New Decatur.—City Council authorized sale of \$7400 of bonds for improvement of Moulton and Grant Sts.; Henry Hartung, City Clerk.

Ala., New Decatur.—City will construct certain cement sidewalks; bids received until April 19; John Patterson, Mayor. (See "Machinery Wanted.")

Ala., Seale.—Russell County Commissioners awarded contract to D. M. Wheeler & Co., Birmingham, Ala., at \$1000 per mile for grading road from Seale to Girard; additional roads are to be graded; \$100,000 of bonds issued.

Ala., Selma.—D. R. Cook & Co., Selma (recently noted as receiving contract), state that they are constructing 18 miles of clay and gravel roads for Dallas county, this being first contract under bond issue of \$350,000; G. R. Thomas, County Engineer.

Ala., Tuscaloosa.—City will soon ask bids on 455 square yards concrete sidewalks, 8329 linear feet concrete curb and 4465 linear feet combined curb and gutter; W. H. Nicol, City Engineer. (See "Sewer Construction.")

D. C., Washington.—C. B. Hunt, engineer of highways, has completed plans for laying of asphalt and asphalt block on unpaved streets; \$79,500 appropriated.

D. C., Washington.—Commissioners District of Columbia will receive bids until April 22 for repaving asphalt pavements for period ending June 30, 1913. (See "Machinery Wanted.")

Fla., Jacksonville.—J. J. Logan, chairman of highway committee, Board of Trade, and associates plan constructing modern highway to Georgia boundary.

Fla., Jacksonville.—City will receive bids until May 3 for asphalt macadam resurfacing of about one and one-eighth miles on Atlantic Blvd.; Gail L. Barnard, County Engineer, Room 9 Courthouse, Jacksonville. (See "Machinery Wanted.")

Fla., Pensacola.—Board of Public Works adopted resolution providing for construction of 14 blocks of hard roads on east side of city as follows: Chase St. from Alcaniz St. to bay; Thirteenth Ave. from Chase to Gregory St.; Gregory St. from Thirteenth to Fourteenth Ave. and Fourteenth Ave. from Gregory to Gadsden St.

Fla., Jasper.—Hamilton County Commissioners awarded contract to Jasper Land & Improvement Co. to construct 35 miles of road; cost not to exceed \$300 per mile.

Ga., Americus.—City voted issuance of \$105,000 of bonds for street paving, improvements to water-works and extension of sewer system. Address The Mayor.

Ga., Carnesville.—Franklin County Commissioners have been petitioned, it is reported, to order election to vote on issuance of \$50,000 road bonds.

Ky., Mount Sterling.—City will construct 12,000 yards of paving; vitrified blocks and concrete base; H. M. Ringo, City Clerk. (See "Machinery Wanted.")

La., Franklinton.—Washington Parish Police Jury has contracted with J. S. Moody to construct one mile of improved road.

La., Houma.—City awarded contract to Comerford, Garber & Co. to construct cement sidewalks on Church, Lafayette and Russel Sts.

La., New Iberia.—Teche Land Co., Geo. P. Lane, manager, New Iberia, La., contemplates construction of 5000 feet three or four-foot-wide pavement. (See "Land Developments.")

La., New Orleans.—State Highway Department, Baton Rouge, La., will open bids April 26 for construction of first section of road in Grant county from Cofax to Rochelle, distance of 32 miles; Gervais Lombard, assistant State engineer, will be in charge.

La., Shreveport.—City voted issuance of \$250,000 of bonds for street improvements. Address The Mayor. (Recently mentioned.)

La., Shreveport.—City will construct concrete curbing and sidewalks; bids opened April 11; L. H. Baker, secretary-treasurer.

Md., Baltimore.—City will vote May 2 on \$5,000,000 paving loan and \$2,500,000 annex-improvement loan; B. T. Fendall, City Engineer.

Miss., Columbus.—City will construct 6000

linear feet of concrete curb and gutter or granite curb and concrete gutter recently noted; will receive bids until May 2; E. S. Donnell, Mayor; C. L. Wood, engineer. (See "Machinery Wanted.")

Miss., Meridian.—Beat 1 of Lauderdale county awarded contract to Healy Construction Co., McAlester, Okla., to construct with macadam four five-mile sections of roads.

Mo., Liberty.—Clay County Commissioners have been petitioned to order election for voting on construction of 10½ miles of rock road from Kansas City to Excelsior Springs.

Mo., Sedalia.—Pettis county will vote May 16 on issuance of \$350,000 of bonds for construction of 125 miles of rock roads. Address County Commissioners.

N. C., Fayetteville.—Street committee, C. B. Ledbetter, chairman, will recommend to Board of Aldermen bid of F. J. McGuire, Richmond, Va., for 10,000 additional feet of paving, and bid of Bowe & Page, Charleston, S. C., for curbing; H. J. McBale, City Clerk.

N. C., Hamlet.—City will vote May 2 on issuance of \$5000 of bonds for street improvements. Address The Mayor.

N. C., Linville.—Appalachian Highway Co. has been organized with \$300,000 capital stock, and privilege of increasing, to construct "Crest of Blue Ridge" highway, probably from Linville to Asheville, distance of about 90 miles; road is to be from 20 to 30 feet wide and have 4½ per cent. grade; Joseph Hyde Pratt, Chapel Hill, N. C., is president; C. P. Amher, vice-president, and George L. McKay, secretary-treasurer, both of Asheville. (Recently mentioned.)

N. C., Waynesville.—Southern Assembly, Rev. James Cannon, general superintendent, will construct five miles of boulevard around lake (in connection with development of religious educational settlement), to include concrete culverts and road bridges; later will construct five additional miles of roads; sand clay will be used on first five miles; day labor; work will begin May 1. (Previously described under "Land Developments," etc.)

Okla., Oklahoma City.—City will grade and pave with asphaltic concrete Avenue E, Avenue F, Avenue D, Hudson Ave., etc.; bids received until April 18; Bob Parman, City Clerk. (See "Machinery Wanted.")

S. C., Aiken.—Aiken-Augusta Public Highway Association organized with H. M. Dible, president; Herbert E. Gyles, vice-president; J. W. Ashhurst, treasurer, and T. C. Stone, secretary; to construct proposed road from Aiken to Augusta, Ga.; road of sand-clay, costing about \$500.

Tenn., Maryville.—Blount County Court voted \$300,000 bond issue for additional road construction; engineer not employed; date of opening bids not set; T. F. Cooper, Pike Commissioner.

Tenn., Nashville.—Legislature authorized \$150,000 bond issue for street improvements. W. W. Southgate, City Engineer.

Tex., Dallas.—City Commissioners awarded contract to Texas Bitulithic Co. for paving Walton St. from Elm to Worth St. at \$2.30 per square yard, making total of \$5065.77, city share to be \$1934.92; to Creosoted Wood Block Co. for paving Ross Ave. from Garrett St. eastward to city limits at \$2.59 per square yard, making total cost \$21,999.03, city share to be \$8016.97.

Tex., Dallas.—Municipal Commissioners awarded following contracts for additional street paving: Texas Bitulithic Co., Dallas, Tex., Forest Ave. from Central Azra at \$2.30 per square yard, total \$65,018.20; city's share to be \$19,968.94; Worth St. from Pacific Ave. at \$2.30 per square foot, total cost \$55,088.40; city's share to be \$21,765.80; Boulevard from Central to Oakland, from Jeffries to Azra, and from Jeffries to Oakland; section from Jeffries to Oakland to cost \$7429.20; city's part to be \$3127.85; Azra St. from Grand Ave. to Forest at \$2.30 per square foot, total cost to be about \$10,000. Creosoted Wood Block Paving Co., Dallas, \$2.59 per square yard for paving Grand Ave. from Ervay to Fair Park, total cost to be \$70,960.84; city's part to be \$27,397.96.

Tex., Granger.—M. M. Gardner, County Commissioner, Precinct No. 3, Williamson county, states bids will be advertised for construction of gravel roads about June 1 or earlier; engineer not yet employed. (Precinct No. 2 recently noted to vote \$103,000 bond issued for road construction.)

Tex., Longview.—Gregg County Commissioners awarded contract to C. B. Brumback & Co. for construction of concrete sidewalks and curbing around courthouse; walk to be five feet wide and 18 inches high; cost \$2000.

Tex., Luling.—Road Precinct No. 2 of Caldwell county voted issuance of \$50,000 of bonds for road construction. Address Precinct Commissioners.

Tex., Polytechnic.—City contemplates grading streets and paving additional sidewalks; J. R. Thomas, Mayor.

Tex., San Antonio.—Bexar county will grade Nacogdoches Rd. from Bulverde to Cibola Rd.; bids received until April 20; Thomas E. Ramsey, County Auditor. (See "Machinery Wanted.")

Tex., Wharton.—City voted to construct sidewalks; ordinance provides for special appropriation of \$15,000. Address The Mayor.

Va., Abingdon.—Street Committee of Bristol and Road Commissioners and Supervisors of Goodson district of Washington county, Abingdon, have agreed upon grading and macadamizing of four principal roads leading out of city into county; according to contract district will expend \$35,000 and city \$12,000, as follows: On road to Green Spring, \$11,500; Wallace Rd., \$9500; Mumpower Rd., \$7500; Three Spring Rd., \$7500.

Va., Highland Park, P. O. Richmond.—City voted issuance of \$50,000 of bonds for street and sidewalk improvements, completion of water system and more street lights; A. G. Quarles, chairman committee on light and water.

Va., Norfolk.—Board of Control will recommend to Common Council that \$8500 be appropriated for repairs to Jamestown Blvd; W. T. Brooke, City Engineer.

Va., Newport News.—L. B. Manville (interested) advises Manufacturers Record that proposed 36-mile sand-clay road between Newport News and Richmond (about 26 miles already constructed) will be built in accordance with requirements of State Highway Commission; bid to be 22 feet wide, thrown up in center with road machine, giving crown of 12 inches to 18 inches; drainage grade; cross drains; 8-inch terra-cotta pipe.

Va., Portsmouth.—City will grade and remove earth from portions of Pearl, County and Glasgow Sts.; also pave with vitrified brick, on sand foundation, roadway of County St. from Chestnut to Blount St.; place five-inch granite curbing on County St. between Chestnut and Rose Sts., and on Glasgow St. from Scotts Creek bridge to Belt Line Railroad, and pave with bituminous macadam roadways on County St. between Blount and Rose Sts., and on Glasgow St. from Scotts Creek bridge to Belt Line Railroad; bids received until April 19; Ransom Sykes, City Engineer.

Va., Portsmouth.—Norfolk county will construct macadam road from bridge at Lafayette Residence Park to road formerly known as Cottage Toll Bridge Rd.; bids received until April 17; Alvah H. Martin, chairman Permanent Road Improvement Commission; P. St. J. Wilson, State Highway Commissioner, Richmond, Va. (See "Machinery Wanted.")

Va., Portsmouth.—Seventh Ward Local Board of Improvement, D. F. Appenzeller, chairman, awarded contract to E. Parke Lindsay of Portsmouth at \$14,260.70 to improve South St.; work will include grading, brick pavement on sand base, 2000 linear feet of five-inch granite curbing and 5600 square yards Tarvia macadam roadway on eight-inch base from Rice's Branch to county line. (Call for bids lately noted.)

Va., Richmond.—Southeastern Virginia Good Roads Association organized with O. C. Roland, president, Garrett, Va.; W. M. Powell, vice-president, Emporia, Va., and H. Crim, secretary-treasurer, Peck, Va.; will construct 87 miles of road between Richmond and Carolina line via Petersburg, Va.

Va., Union Level.—Buckingham district of Mecklenburg county contemplates voting on issuance of \$50,000 of bonds to improve with sand, clay and gravel about 46 miles of roads. Address County Commissioners, Boydton, Va.

## SEWER CONSTRUCTION

Ala., New Decatur.—City will construct certain sewer and sanitary sewer laterals; bids received until April 19; John Patterson, Mayor. (See "Machinery Wanted.")

Ark., Pulaski Heights.—City Council is considering construction of sewer system; drainage into Arkansas River. Address The Mayor.

Ala., Tuscaloosa.—W. H. Nicol, City Engineer, has completed preliminary survey for proposed storm sewer to be constructed from 8th to 14th St.; cost \$5700. Mr. Nicol states bids will soon be advertised for 450 feet 42-inch, 350 feet 36-inch and 400 feet 30-inch concrete sewer; 450 feet 24-inch, 350 feet 20-inch and 1000 feet 18-inch terra-cotta sewer; 7 manholes; 25 inlets; also some sidewalk, curb and gutter. (See "Road and Street Work.")

Ga., Americus.—City voted issuance of \$105,000 of bonds for extension of sewer

system, improvements to water-works and street paving. Address The Mayor.

Ga., Blakely.—City will vote April 22 on issuance of \$60,000 of bonds for improvement of sewerage system and erection of school building. Address The Mayor.

Ky., Bowling Green.—City contemplates construction of sewerage system. Address The Mayor.

Ky., Madisonville.—City is considering construction of disposal plant and about eight miles of sanitary sewers; Alvord & Burdick, Hartford Bldg., Chicago, Ill., are preparing plans.

Md., Ridgely.—Town will vote April 24 on issuance of bonds for construction of sewer system. Address Town Clerk.

Mo., St. Joseph.—City will construct 36-inch vitrified-pipe main sewer in 18th St. extension of Upper Whitehead main sewer; bids received until April 15; will also construct vitrified pipe and four-foot concrete pipe main sewer in Fifth Ave., to cost \$7000; J. P. Strite, secretary Board of Public Works.

Okla., Mangum.—City will extend and re-equip sewer and water systems; bids received until April 12; John H. Tomme, City Clerk. (See "Machinery Wanted.")

Okla., Oklahoma City.—City will construct main storm sewer on Walker Ave. and on Avenue E.; bids received until April 17; Bob Farman, City Clerk. (See "Machinery Wanted.")

S. C., Spartanburg.—City will construct 4 lines of sewers, 300, 1700, 100 and 50 feet long, respectively; bids received until April 24; J. H. Shores, Superintendent of Streets. (See "Machinery Wanted.")

Tex., Polytechnic.—City contemplates issuing \$15,000 to \$20,000 of bonds for construction of sewer system; J. R. Thomas, Mayor. (Recently mentioned.)

W. Va., Huntington.—City will construct various lateral sewers; bids received until May 8; A. B. Maupin, City Engineer. (See "Machinery Wanted.")

#### TELEPHONE SYSTEMS

Ark., Fort Smith.—Southern Telephone Co., Fordyce, Ark.; Pan Long Distance Telephone Co. of Fort Smith and Kinlock Telephone Co. of Missouri will consolidate with Fort Smith as central point; Southern Telephone Co. has purchased Kizer Telephone Co.'s plants at Mena and Ashdown and is now constructing system from Little Rock to Fort Smith, connecting with Kinlock Company's system at Fayetteville, Ark.; plan is to establish \$300,000 plant in Fort Smith, including automatic system with double copper-wire circuit, conduit and cable system.

Md., Ridgely.—Farmers & Merchants' Telephone Co. will erect two-story concrete exchange building.

N. C., Linwood, R. F. D. No. 2.—Fairmont-Silver Telephone Co. incorporated with \$20,000 capital stock by G. C. Palmer, Silver Hill, N. C., and others; construct telephone system from Southmount and Silver Hill to Lexington.

Okla., Anadarko.—Sugar Creek Telephone Co. incorporated by John W. Howard, Charles Lamb and Henry P. Schenk.

Tex., Corpus Christi.—Southwestern Telephone & Telegraph Co. (main office, Dallas, Tex.) will erect building for city headquarters.

Tex., Tyler.—Talbert Telephone Co. incorporated with \$25,000 capital stock by J. A. Talbert, J. C. Smith and M. Starnes.

W. Va., Mt. Storm.—Alleghany Mutual Telephone Co. incorporated with \$4000 capital stock by J. H. Shaeffer of Mt. Storm, R. F. Seerist of Scherr, W. Va.; J. L. Aronhalt of Gorman, W. Va., and others.

W. Va., Oak Hill.—Beckley & Fayetteville Telephone Co. increased capital stock from \$5000 to \$25,000; Cal Mankin, president.

#### TEXTILE MILLS

Ala., Demopolis.—Cotton Yarns.—Elmore Cotton Mills will be incorporated with \$50,000 capital stock to operate mill owned by Benj. F. Elmore and M. E. Anderson; has 4000 spindles; address Mr. Elmore.

N. C., Asheville.—Quilts.—French Broad Manufacturing Co. acquires Asheville Quilt Mills, containing 84 broad quilt looms, bleaching and finishing machinery, electrical drive, etc. (Lately reported incorporated with \$20,000 capital stock at Craggy, N. C.)

N. C., Salisbury.—Ginghams, etc.—Salisbury Cotton Mills will build raw stock dyehouse and add 34 looms; has awarded contracts.

N. C., Statesville.—Cotton Yarns.—Statesville Cotton Mills awarded contract for additional machinery; includes 1000 spindles, 8 cards, etc.; cost about \$16,000. (Lately noted.)

S. C., Dillon.—Cotton Yarn.—Dillon Mills chartered with \$750,000 capital stock to consolidate Dillon Cotton Mills and Maple Cotton Mills of Dillon and Hamer Cotton Mills of Hamer, S. C.; have 38,000 ring spindles and 3600 twister spindles; W. M. Hamer, president.

S. C., Calhoun Mills.—Cotton Cloth.—Jas. P. Gossett, president of Calhoun Mills, advises it is not true his company will add spindles, etc. (Recently rumored.)

S. C., Greenville.—Linen Towels, etc.—Clayton Linen Mills chartered with \$300,000 capital stock by Raven I. McDavid of Greenville, R. L. Stanton of Providence, R. I., and others; will build mill to manufacture towels, etc., from Russian linen mill waste; architect engineer in charge, J. E. Sirrine of Greenville.

S. C., Greenville.—Cotton Cloth.—Pelzer Corporation will organize with \$12,000,000 capital stock, controlling mills with 550,000 spindles and 12,000 looms; reports state Ellison A. Smyth will be president; mills to include Dumeau Mills, Conestee Mills and Monaghan Mills of Greenville; Belton Mills of Belton, S. C.; Pelzer Manufacturing Co. of Pelzer, S. C.; Ninety-Six Cotton Mills, Grendel Mills and Greenwood Cotton Mills of Greenwood, S. C.; Watts Mills of Laurens, S. C.; Riverside Manufacturing Co. and Toxaway Mills of Anderson, S. C.; Issaquena Mills of Central, S. C., and Saxon Mills of Spartanburg, S. C.

Tex., Dallas.—Absorbent Cotton, Towels, etc.—It is contemplated to install machinery for manufacturing absorbent cotton and its products, towels, cotton gauze and cheese cloth; equipment not purchased. Address P. O. Box 505. (See "Machinery Wanted.")

Va., Williamsburg.—Knit Goods.—C. C. Groat of New York plans purchase of Williamsburg Knitting Mills Co. and installing new machinery to cost \$40,000.

#### WATER-WORKS

Ala., Tuscaloosa.—Water-works Commission, F. G. Blair, president, recommends installation of additional pump costing about \$1500; contemplated to lay six-inch water main on 13th St. from Twelfth to Eighteenth Ave., costing about \$1333.

Ala., Alleeville.—City is considering organization of local company for construction of water-works. Address The Mayor.

Ga., Americus.—City voted issuance of \$105,000 of bonds for improvements to water-works, extension of sewer system and street paving. Address The Mayor.

Ga., Colquitt.—City voted issuance of \$22,000 of bonds for extension of water-works, construction of electric-light plant and erection of school building. Address The Mayor.

Ga., Fairburn.—City is having plans prepared by J. B. McCrary & Co., Atlanta, Ga., for construction of water-works. (City recently stated to have issued \$20,000 of bonds for water-works.)

Ga., Roberta.—John W. Dent will construct water-works; construction begun.

Ky., Corbin.—City is considering construction of water-works; W. M. Steele, secretary.

Ky., Bowling Green.—City will install centrifugal pump in water-works plant. Address The Mayor.

La., Homer.—Town will construct water-works. Address Town Clerk.

Mo., Moberly.—Board of Public Works, H. A. Hatfield, president, will receive bids until April 20 for furnishing material and improving and extending water-works. Bids will be received for work in sections, as follows: Section 1—two four-valve, high-speed automatic engines; section 2—two 75-kilowatt A. C. generators, 2300 volts, for direct connection to above engines, complete, with exciters, etc.; section 3—1,200,000-gallon crank and fly-wheel pumping engine; section 4—three horizontal high-pressure return tubular boilers, 125 horse-power each; section 5—400-horse-power feed-water heater and boiler-feed pump; section 6—heads for two wells already sunk, all motor driven; section 7—switchboard; section 8—brick stack, 85 feet high; section 9—constructing power-house, also street lighting system, etc.; Rollins & Westover, engineers, Beals Bldg., Kansas City. (Previously mentioned.)

Miss., Bassfield.—City voted issuance of bonds for construction of water-works. Address The Mayor.

Mo., Princeton.—Rollins & Westover, Beals Bldg., Kansas City, Mo., are preparing plans for water-works.

N. C., Thomasville.—City has contracted with J. B. McCrary & Co., Atlanta, Ga., for construction of water-works. (Board of Aldermen recently stated to have voted issuance of \$75,000 of bonds at present and \$50,000 more after June assessment for water-works.)

Okla., Ada.—W. B. Jones, City Clerk, states proposals will be received at his office in city hall until April 17 for furnishing pipe-distributing material and labor for recently noted extension and improvements; 66,000 linear feet pipe; Goodwin & Harper, consulting engineers, 920 Scarrit Bldg., Kansas City, Mo. (See "Machinery Wanted.")

Okla., Helena.—Town has issued \$10,000 of bonds for extension of water-works; L. A. Ruley, Town Clerk.

Okla., Mangum.—City will extend and re-equip water-works and sewer systems; bids received until April 12; John H. Tomme, City Clerk. (See "Machinery Wanted.")

Okla., McAlester.—City will vote April 22 on issuance of \$80,000 of bonds for extension of water-works to Gaines Creek, distance of 11 miles; 12-inch pipe will be used. Address The Mayor.

Okla., McAlester.—City will probably soon vote on issuance of \$150,000 of bonds for construction of additional dam and pipe line to Gaines Creek for purpose of pumping water distance of about eight miles to present reservoir. Address The Mayor.

Okla., Oklahoma City.—City will receive bids until April 17 for construction of reinforced concrete sedimentation basin at water-works pumping station; basin will be 200 feet long, 100 feet wide and 12 feet deep; will increase capacity of plant about 3,000,000 gallons daily; V. G. Shinkle, Superintendent of Water Department. (Recently mentioned. See "Machinery Wanted.")

Okla., Roswell.—Town has, it is reported, issued \$35,000 of bonds for construction of water-works and installation of electric-light plant. Address Town Clerk.

Okla., Wynoka.—Town has, it is reported, voted issuance of \$27,000 of bonds for construction of water-works. Address Town Clerk.

Tex., Eastland.—City will construct water-works; has issued \$15,000 of bonds; \$10,000 has been expended on storage reservoir dam. Address The Mayor.

Tex., Brownsville.—City awarded contract to J. C. Debrun of Brownsville to install filter plant at municipal water-works; daily capacity, 1,000,000 gallons; cost \$10,000. (City recently reported to have voted \$35,000 bond issue to double capacity of water-works.)

Tex., Nocona.—City will vote May 8 on \$17,500 bond issue for water-works. Address J. L. Davis, Secretary.

Tex., Polytechnic.—City voted issuance of \$20,000 of bonds for construction of water-works; will drill well about 1200 feet deep, erect steel tank and lay eight-inch mains; J. R. Thomas, Mayor. (Recently mentioned.)

Tex., Tulla.—City voted issuance of \$25,000 of bonds for construction of water-works and electric-light plant. Address The Mayor.

Tex., Yorktown.—City will vote May 6 on issuance of \$6000 of bonds for extension of water mains. Address The Mayor.

Va., Graham.—Norfolk & Western Railway, C. S. Churchill, chief engineer, Roanoke, Va., will improve pumping station; install pump with capacity of 250,000,000 gallons of water in 24 hours and enlarge power-house; estimated cost, \$16,000; work under supervision of J. R. Anderson and W. I. Short of Graham.

Va., Granbury.—Granbury Water, Ice, Light & Power Co. (recently reported incorporated with \$30,000 capital stock) will install water, ice and electrical machinery; James W. Hockaday (not Rockaday, as lately stated), manager. (See "Machinery Wanted.")

Va., Highland Park, P. O. Richmond.—City voted issuance of \$50,000 of bonds additional for completion of water system, street and sidewalk improvement and more street lights; A. G. Quarles, chairman committee on light and water.

Va., South Hill.—City is considering construction of water-works. Address The Mayor.

W. Va., Barboursville.—D. A. Allen states he will not install water plant at present. (Recently noted to receive franchise.)

W. Va., Milton.—Milton Water Co. has been organized to construct water-works; petitioned Town Council for franchise.

#### WOODWORKING PLANTS

Ala., Mobile.—Barrels, etc.—P. S. Carr & Co. will establish plant for manufacturing barrels, boxes, crates, etc.

Ga., Macon.—Vehicles.—Williams Wagon Works incorporated with \$12,000 capital stock by R. A. J. R. and R. H. Williams; will occupy building 95x150 feet (in course of construction); first floor for blacksmith shop and stables, and second for paint shop and storeroom; company's main work will be general repairing, but will also manufacture spring buggies and wagons.

Ky., Bowling Green.—Furniture.—Kister Lumber & Furniture Co. incorporated with \$25,000 capital stock by F. L. Kister, Jr., W. E. Kister and Mrs. Dora Kister; will manufacture furniture and operate saw and planing mills.

La., Hanson City, P. O. New Orleans.—Box Shooks.—Hanson City Box Co. (formerly Baton Rouge Veneer Works) will establish plant to manufacture box shooks; daily capacity, two cars of box shooks; has building and machinery; company not organized. (Baton Rouge Veneer Co., R. H. McLeod, owner, recently noted under "Lumber Manufacturing Plants" to rebuild burned veneer plant in Hanson City.)

Md., Baltimore.—Furniture.—Henry Roesser & Sons, 333 S. Fremont Ave., awarded contract to J. Elmer Stanfield & Co., 14 N. Greene St., Baltimore, to erect three-story addition to furniture factory.

Miss., Rosetta.—Staves.—Homochitto Stave Co. incorporated with \$10,000 capital stock by N. B. Hester, M. Westmoreland and O. Hester, all of Macon, Miss.

N. C., Hickory.—School Desks, etc.—Ivey Manufacturing Co., G. F. Ivey, president, will install machinery to manufacture school desks; now making loom supplies; recently noted reorganized. (See "Machinery Wanted.")

S. C., Blaney.—Vehicles.—Blaney Hub & Buggy Co. incorporated with \$6000 capital stock; W. H. Tiller, president; G. J. Campstid, vice-president; George W. Thomas, secretary-treasurer.

W. Va., Huntington.—Sash, etc.—Huntington Sash, Door & Trim Co., recently reported incorporated with \$75,000 capital stock, has organized with J. W. Lawton president, H. A. Robson vice president, W. F. Kahler secretary, Frank N. Mann general manager and treasurer; will erect plant at cost of \$70,000.

#### BURNED

Ala., Florence.—A. J. Walker's cotton gin, loss \$5000.

Ala., Littleton.—Southern Railway's depot, D. W. Lum, chief engineer, Washington, store, bakery and two dwellings owned by Pratt Consolidated Coal Co.; Will Angel's store; J. W. Bagley's icehouse; loss about \$10,000.

Ark., Brookings.—Quelimabe Lumber & Manufacturing Co.'s lumber mill; Joseph Nester, manager.

D. C., Washington.—Nauemond Apartment house at 22d and N. Sta. N. W.; loss about \$6000.

Fla., Tampa.—White Star Laundry; estimated loss \$5000.

Ga., Atlanta.—Manchester Hotel, owned by Atlanta, Birmingham & Atlantic Railway, Alex. Bonnyman, general manager, Atlanta, Ga.

Ga., Bowersville.—Leland & Co.'s store; Fred Hilliard's store; postoffice; total loss \$25,000.

Ga., Dalton.—Building owned by Fincher & Nichols, loss \$8000; W. A. Robertson, loss \$7000; McWilliams Bros., loss \$6500; Dalton Cafe, loss \$2000; Dalton Opera-house, loss \$25,000; Thomas Dry Goods Co., loss \$10,000.

Ga., Omega.—L. M. Garrett's store; loss \$12,000.

Ga., Willacoochee.—W. C. Shaw, chief engineer Georgia Southern & Florida Railway, Macon, Ga., states that his company's station was not destroyed by fire. (Recent report an error.)

Ky., Clinton.—Ernest Reid's opera-house, loss \$10,000; Richmond Bldg.; R. L. Johnson's warehouse; J. W. Henry & Co.'s lumber yard, loss \$6000; Mrs. Carrie Morris' residence; Mrs. Tom Ebert's residence.

Ky., Georgetown.—Mrs. Mary Bohison's residence.

Ky., Hickman.—Will Blanggame's residence.

Ky., Richmond.—Mrs. Alice Tribble's residence; loss \$5000.

La., Alexandria.—Dwelling owned by Dr. Duncan; loss \$2500.

La., Ferriday.—Buildings occupied by Max Schiff, James McManus, Woolf Bros., Kauffman Bros., I. Litoff and others; loss \$35,000.

La., Patterson.—T. B. Williams Cypress Co.'s plant (recently reported burned) was old abandoned, not newly-constructed plant.

La., Weswego.—Mrs. Rock Valle's residence; loss \$5000.

Md., West Arlington, Postoffice Baltimore, Md.—Dwelling owned by E. F. Gronaw, Had-don and Ferdburn Aves., West Arlington; loss \$4000.

Md., Easton.—Dwelling, near Easton, owned by Samuel Norris of Easton.



Okl., Kenebeck.—Lowry Bldg., occupied by Kenebeck Mercantile Co.; loss \$4000.

Okl., Oklahoma City.—Peter Hunter's residence.

S. C., Alken.—J. Myers' dwelling; loss \$3000.

S. C., Lumber.—Williams-McKeeson Lumber Co.'s mill; loss about \$100,000; James Mortimer, Jr., general superintendent.

Tenn., Kingsport.—Carolina, Clinchfield & Ohio Railway's passenger and freight depot; loss \$10,000; M. J. Caples, general manager, Johnson City, Tenn.

Tenn., Memphis.—St. Louis & San Francisco Railroad's stockyards; buildings owned by H. T. Bruce.

Tenn., Paris.—J. H. Lasater's grist mill; Mrs. W. H. Lasater's stable; loss about \$3500.

Tenn., St. Elmo.—C. W. Goodlake's residence, loss \$3500; residence occupied by E. J. Hisey, owned by Ernest Scholze, loss \$3500; residence occupied by Robert Watson, owned by Newton Collins, loss \$3500.

Tex., Big Sandy.—Key Hotel; loss \$6000.

Tex., Amarillo.—Building owned by Belle Foster; loss \$3500.

Tex., Brownwood.—Printice Hotel; loss \$7500.

Tex., Bonham.—Dwellings owned by R. A. McDonald and B. E. Allen; loss \$6000.

Tex., Center.—J. C. Rogers states that his building recently reported burned) was but slightly damaged; repairs have been made.

Va., Cheriton.—F. L. Holland's residence.

Va., Norfolk.—Norfolk Collar Pad Co.'s plant damaged; loss about \$5000.

Va., Williamsburg.—James City county courthouse. Address County Commissioners.

W. Va., Berkeley Springs.—James Dawson's residence.

W. Va., Burner.—Pocahontas Lumber Co.'s planing mill; loss \$8000.

### DESTROYED BY STORM

Ala., Leesburg.—Dwellings occupied by Henry Lowe and Rev. G. W. Palmer, and Methodist Church.

## BUILDING NEWS

### BUILDINGS PROPOSED

#### APARTMENT-HOUSES

Ala., Birmingham.—S. Spiro is having plans prepared by W. L. Welton, Birmingham, for \$30,000 apartment-house.

Ala., Gadsden.—T. S. Kyle has plans by C. E. Bearden, Chamberlain Bldg., Chattanooga, Tenn., for apartment-house; 42x66 feet; ordinary brick construction; hot-air heat; electric lighting; cost \$8000. (Recently noted.)

D. C., Washington.—Reginald W. Beall, 1233 G St. N. W., purchased three dwellings and will remodel for stores and apartments. (See "Stores.")

Fla., St. Petersburg.—C. M. Roser will erect apartment-house and store building on Central Ave. near 5th St.; two stories; brick; first floor will contain five storerooms so arranged that iron guides and partitions can be removed, making one large room; second floor, 36 rooms, each 11x13 feet; bids for construction will soon be invited.

Fla., Tampa.—C. C. Whitaker will expend \$6500 to erect apartment-house; 40x50 feet; ordinary frame construction; bids opened April 8; plans by Jay & Lerner (not Shaw & Lerner, as recently reported) of Tampa.

Ga., Savannah.—Dr. T. P. Waring will erect two-story frame apartment-house.

Md., Baltimore.—Henry J. Tinley, 314 N. Charles St., is preparing plans for apartment-house on Callow Ave. and park front; brick; three stories; stone and terra-cotta trimmings; contractors estimating are L. O. Hildebrand & Son, 2217 E. Preston St.; Thomas B. Stanfield, 109 Clay St.; John A. Sheridan, 806 N. Carrollton Ave., and Peters & Harding Contracting & Building Co., 15 E. Fayette St., all of Baltimore.

Md., Baltimore.—Mrs. Jennie Silverstein is having plans prepared by Henry J. Tinley, 314 N. Charles St., Baltimore, to erect apartment-house on Windsor Mill Rd.; three stories; brick; slag roof.

Mo., St. Louis.—Smith Bros. will erect apartment and store building on Delmar, West Gate and Melville Aves.; two stories; gray brick ornamented with terra-cotta; 9 stores and 12 apartments of 6 to 10 rooms each; central heating plant; cost \$60,000.

Mo., St. Louis.—J. Chas. Mueller, 2536 Sullivan Ave., will erect tenement; two stories; cost \$11,400.

Mo., St. Louis.—F. W. L. Rulkoetter, 2341 Athlone Ave., will erect tenement; two stories; cost \$4500.

Mo., St. Louis.—Wm. Booth Papin, 3843 Kennerly Ave., will erect tenement; two stories; cost \$5500.

Mo., St. Louis.—Chankle Real Estate Co., 4961 Fountain Ave., will erect tenement; three stories; cost \$17,000.

Mo., St. Louis.—J. F. Stauder, 3509 McKean Ave., will erect tenement; two stories; cost \$4500.

Okl., Oklahoma City.—A. Levy, 620 W. 4th St., will erect apartment-house; two stories; brick; cost \$3500.

Okl., Oklahoma City.—A. Levy will erect apartment-house at 620 W. 4th St.; two stories; brick; to be completed within eight months; cost \$3500.

Tenn., Nashville.—Charles H. Butler is receiving estimates on erection of apartment-house.

Va., Roanoke.—C. W. Clark, president of Bankers' Loan & Investment Co., New York city, will erect apartment-house corner Sixth Ave. and Park St.; three stories; 55x90 feet; plans are being prepared.

W. Va., Elm Grove.—William Chambers will erect two double frame apartment houses.

W. Va., Wheeling.—R. B. Robinson has plans for apartment-house on Wheeling St., Loveland; three stories; brick; three flats of four rooms each, equipped with private bath, etc.

#### ASSOCIATION AND FRATERNAL

Ga., Savannah.—Masonic Hall Association is having plans prepared by H. W. Witcover, Savannah, for Masonic Temple; five stories; 60x100 feet; fireproof construction; cost \$125,000; date of opening bids not set.

Ky., Hopkinsville.—Benevolent Protective Order of Elks will erect building to replace burned structure; cost about \$17,500. (Recently reported burned.)

Mo., Clayton.—Ancient Free and Accepted Order of Masons will erect temple on Meramec Ave.; two stories; first floor will have seating capacity of 800; cost \$20,000; Fred L. Kerth and Theodore T. Bayer, building committee.

S. C., Anderson.—H. C. Townsend will erect building and lease portion to Benevolent Protective Order of Elks; frontage 26 feet; plate glass front; cost \$9000.

Tenn., Chattanooga.—Colored Ancient Free and Accepted Masons will receive bids through Huntington & Sears, architects, James Bldg., Chattanooga, to erect Masonic Temple on 9th St.; three stories and basement. (Recently noted.)

#### BANK AND OFFICE

Ark., Tuckerman.—L. D. Smith is having plans prepared for erection of business building corner 2d and Main Sts.; two stories; brick.

Fla., New Smyrna.—Florida East Coast Railway, J. H. Nelson, general superintendent, St. Augustine, Fla., will erect office building.

Md., Goldsboro.—Goldsboro Bank will erect bank building.

Miss., Greenville.—Bids received by Joe Weinberg until April 12 to erect office building; certified check for 2 per cent. amount of bid, payable to Mr. Weinberg; plans and specifications at office of Wm. Drago, architect, 1902 Perrin Bldg., New Orleans, La., or at office of Mr. Weinberg.

Miss., Osyka.—Farmers' Bank of Osyka, S. A. Bacot, president, will erect two-story brick bank and office building.

Mo., St. Louis.—Laclede Gas Light Co., 1622 N. 1st St., will expend \$4000 to improve office building.

N. C., Hickory.—L. E. Reis Russell will expend \$15,000 to erect office building; three stories and basement; 50x100 feet; fireproof construction; steam heat; electric lighting; architect not selected; construction will not begin for one year. (Recently noted.)

N. C., Lenoir.—Rouse Banking Co., N. J. Rouse, president, is planning to rebuild burned bank building.

N. C., Wilmington.—Atlantic Bank & Trust

Co. is having plans prepared by J. F. Leftner, Wilmington, for bank and office building; fireproof construction; six or eight stories; cost \$45,000 to \$75,000. (Recently noted to erect this structure.)

Okl., Skiatook.—First National Bank of Skiatook, C. H. Cleveland, president, will open bids about April 25 to erect bank and office building; 25x60 feet; fireproof construction; steam heat; gas lighting; cost \$5000 to \$7000. (See "Machinery Wanted.")

S. C., Anderson.—W. L. Brissey has not definitely determined upon plans for office building and showrooms recently noted to be erected.

Tenn., Memphis.—D. A. Fisher and F. N. Fisher will erect 16-story office building on Madison Ave., between Main and 2d Sts.; plans not made. (Recently noted under "Stores.")

Tex., Houston.—First National Bank has plans by Sanguinette & Staats, Houston, for annex; two stories and basement; will contain power plant for lighting, pumping and heating system; cost \$50,000.

Tex., Houston.—Condos Bros. will probably erect store and office building. (See "Stores.")

Va., Elba.—Elba Savings Bank is having plans prepared by McLaughlin & Johnson, Lynchburg Bldg., Lynchburg, Va., for bank building; one story; brick; metal or slag roof; cost \$2500.

Va., Petersburg.—American Bank & Trust Co. has plans by Huggins, Bates & Coburn, Roanoke, Va., for bank building; two stories and basement; 31x106 feet; ordinary construction; steam heat; gas and electric lighting; cost (exclusive of vaults and lot) \$20,000. Address architects. (Recently noted.)

Va., Richmond.—First National Bank Building Corporation, John B. Purcell, president, is having plans prepared by Clinton & Russell and A. C. Bosson, 32 Nassau St., New York, for bank and office building; 20 stories; total height 239 feet. (Recently described.)

W. Va., Falling Springs.—Bank of Renick will receive sealed bids until 12 M. April 25 (extended date) for erection of one-story brick bank building; 24x40 feet; check for \$50 must accompany bid; plans and specifications on file at bank; usual rights reserved. (Recently noted.)

#### CHURCHES

Ala., Birmingham.—Congregation of Temple Emanuel contemplates erection of temple on Highland Ave.; cost \$75,000. Address The Rabbi of Temple Emanuel Congregation.

D. C., Washington.—Congress Heights Baptist Church, Charles F. Purdy, chairman building committee, will erect church.

Fla., Miami.—Christian Church will erect edifice. Address The Pastor, Christian Church.

Fla., St. Petersburg.—First Baptist Church, Rev. J. E. Oates, pastor, contemplates erecting addition to Sunday-school.

Fla., Tampa.—Bonfoy & Elliott, Tampa, have prepared plans for erection of Presbyterian chapel in Morrison Grove.

Fla., West Palm Beach.—First Church of Christ, Scientist, will erect edifice corner Poinsettia St. and Hibiscus Ave. Address Reader, First Church.

Ga., Augusta.—Woodlawn Baptist Church, Rev. R. E. L. Harris, pastor, will erect \$25,000 edifice.

Ga., Blakely.—Baptist congregation will erect \$12,000 edifice. Address The Pastor Baptist Church.

Ga., Moultrie.—C. W. Piddock, Ben Vandalson and W. C. Vereen, building committee of Presbyterian Church, will receive bids until April 15 to erect edifice.

La., Shreveport.—Noel Memorial Methodist Episcopal Church South, Rev. Francis A. Downs, pastor, 1725 Line Ave., will open bids about May 1 to 15 to erect edifice recently noted; 90x112 feet; auditorium and galleries to seat 750; brick finished with plaster; wooden partitions; heating not decided; electric lighting; cost \$35,000 to \$40,000; plans by Matthews & Clarke, St. Louis, Mo. (See "Machinery Wanted.")

Md., Baltimore.—Baltimore Hebrew Cemetery Association, F. G. Nollenberger, superintendent, Belair Ave. Ext., is having plans prepared for erection of stone chapel.

Md., Frederick.—Methodist Episcopal Church, Rev. E. H. Lamar, pastor, will improve interior of church; estimated cost of improvement \$25,000.

Md., Midland.—Presbyterian congregation, Rev. S. H. Jewell, pastor, Barton, Md., is ready to receive bids for erection of edifice; seating capacity, 200; ordinary construction;

gas heating and lighting. (Recently noted.) Md., Williamsport.—Zion Lutheran Church, Rev. Dr. D. Upton Blair, pastor, contemplates erection of edifice or remodeling present structure.

N. C., Apex.—Presbyterian congregation will erect edifice. Address The Pastor, Presbyterian Church.

Okl., Tulsa.—Lutheran Church, Rev. Calvin Sifferd, pastor, will erect edifice.

S. C., Florence.—Second Baptist Church, Rev. M. C. Walton, pastor, is having plans prepared for erection of \$5000 church.

S. C., Florence.—Building committee of Methodist Church is having plans prepared by W. J. Wilkins of Florence for erection of edifice.

S. C., Marion.—Methodist congregation, Will Stackhouse, chairman of building committee, is having plans prepared for edifice; estimated cost \$40,000.

Tex., Hillsboro.—First Presbyterian Church, Rev. R. P. Walker, pastor, will open bids about May 1 for erection of edifice; 75x82 feet; cost \$12,000; plans by Galbraith Bros., Hillsboro. (Recently noted.)

Tex., Houston.—Baptist Temple will erect edifice; cost \$15,000 to \$20,000. Address The Pastor, Baptist Temple.

Va., Luray.—Primitive Baptist Church, Rev. R. H. Pittman, pastor, is now ready to receive bids to erect edifice; 40x65 feet; concrete foundation; brick walls; slate roof; hot-air heat; electric lighting; cost \$4000; plans by J. H. Boston. (Recently noted.)

Va., Lynchburg.—Episcopal Church is having plans prepared by McLaughlin & Johnson, Lynch Bldg., Lynchburg, for edifice and parish-house at Randolph-Macon Heights; cost \$40,000; cost of parish-house, \$15,000; at present will only erect Sunday-school addition at cost of \$15,000; English design, tapestry brick and stone trimmings.

W. Va., Elm Grove.—First M. E. Church commissioned C. D. McCarty of Wheeling, W. Va., to prepare plans for proposed edifice.

W. Va., Keystone.—Rev. H. B. Brown, Eckman, W. Va., will receive bids until April 15 to erect brick church.

#### CITY AND COUNTY

Ala., Hamilton.—Jail.—Marion County Board of Commissioners will receive plans and specifications in June to erect jail. Address County Commissioners.

Ga., Macon.—Jail.—Bibb county will vote in fall on \$25,000 bond issue for improvements to jail; plans to remodel and erect addition; 35x43 feet; four tiers of cells; plans by Alexander Blair, Macon. (Previously noted to expend this amount for these improvements.)

Ga., Rome.—Alms-house.—Floyd County Commissioners contemplate erection of alms-house; cost about \$12,500.

La., Monroe.—Bathhouse.—City will erect addition to bathhouse. Address The Mayor.

Md., Broomfield.—City Hall.—City will vote May 8 on proposition to erect city hall; brick; two stories. Address The Mayor.

S. C., Columbia.—Jail, etc.—City is having plans prepared by Shand & Lafaye of Columbia to erect jail, police station, stable, etc., on Lincoln St., between Washington and Hampton Sts.; W. H. Gibbs, Mayor. (Lately mentioned.)

Tenn., Benton.—Jail.—Polk County Commissioners, J. H. Williamson, chairman county court, will erect addition to county jail; steam heat; will install new cages, cells, etc.; cost \$5000 to \$8000. (See "Machinery Wanted.")

Tenn., Nashville.—Market-house.—House of Representatives passed bill authorizing issuance of \$200,000 bonds for market-houses; W. W. Southgate, City Engineer.

Tex., Galveston.—Storage Building.—City will soon award contract to erect storage building adjacent to water-works; fireproof construction; brick; concrete floor; galvanized iron roof; John D. Kelly, City Secretary.

Va., Big Stone Gap.—Library.—City plans erection of Carnegie Library. Address The Mayor.

#### COURTHOUSES

Ga., Atlanta.—Fulton County Commissioners have plans by A. Ten Eyck Brown, 607 Forsyth Bldg., and Morgan & Dillon, associate architects, Atlanta, to erect reinforced concrete and steel frame courthouse; nine stories and basement; granite and marble; fireproof; 216x126 feet; building will have three large entrances opening into vestibules, thence into lobby 46 feet square; will contain nine regular courtrooms, each two stories in height, averaging 50x60 feet; four elevators; sanitary plumbing, etc.; cost about \$750,000. (Lately mentioned.)

Ga., Hinesville.—Liberty County Commissioners will receive bids to erect \$30,000 courthouse; E. C. Miller, clerk. (Recently reported as having plans prepared by Chamberlain & Co., Birmingham, Ala.)

Ga., Macon.—Bibb county will vote in the fall on \$100,000 bond issue to erect courthouse. Address County Commissioners. (Previously noted to vote on \$75,000 bond issue.)

La., Grand Cane.—City contemplates erection of \$50,000 courthouse. Address The Mayor.

La., Ville Platte.—Evangeline Parish Police Jury selected Emile Well, New Orleans, La., to prepare plans for courthouse; two stories and basement; pressed brick; cost \$75,000. (Recently noted.)

Tenn., Benton.—Polk County Commissioners will expend \$8000 to erect addition to courthouse.

Va., Williamsburg.—James City County Commissioners will rebuild burned court house. Address County Commissioners.

### DWELLINGS

Ala., Tuscaloosa.—Dr. Alson Fitts will erect residence.

Ala., Corey, R. F. D. from Ensley.—John C. Lusk is having plans prepared by W. L. Welton, Birmingham, Ala., for \$5000 dwelling.

Ala., Corey, R. F. D. from Ensley.—E. J. Dunn is having plans prepared by W. L. Welton, Birmingham, Ala., for \$5000 dwelling.

Ala., Corey, R. F. D. Ensley, Ala.—Ensley Land Co., Ensley, Ala., will erect 75 dwellings for operators of steel and wire company; cost \$100,000; first 25 now under construction.

Ala., Gadsden.—Sam H. Sibert will erect residence corner 12th and Candler Aves.; cost \$4000.

Ala., Gadsden.—W. P. Johnson is having plans prepared to erect dwelling corner Walnut and 9th Sts.; frame; cost \$4500.

Ark., Pine Bluff.—Pine Bluff Hotel Co. organized with \$250,000 capital stock; J. B. Talbot, president; will erect hotel; six stories; cost \$350,000.

D. C., Washington.—John R. Haislip, 2120 1st St. N. W., has plans by H. O. Clark, Washington, for five two-story brick dwellings at 701-709 Taylor St. N. W.; cost \$12,000; construction by owner.

D. C., Washington.—H. A. Kite has plans by A. H. Beers, 1342 New York Ave. N. W., Washington, for two two-story brick dwellings at 1826-28 Lincoln Rd. N. E.; construction by owner.

D. C., Washington.—Charles W. King, Jr., 1519 Monroe St. N. W., will erect six dwellings on I St. between 25th and 26th Sts.

D. C., Washington.—Evelyn L. Yeomans, The Woodley, will erect one-story frame dwelling at 3716 McKinley St.; cost \$5500.

D. C., Washington.—H. R. Howenstein, 1314 F St. N. W., will erect two dwellings at 1437-1439 Potomac Ave.; two stories; brick; cost \$4500; owner architect and builder.

Fla., Jacksonville.—F. M. Richardson will erect dwelling on southeast corner Main and 8th Sts.; three stories; brick; 90x110 feet; cost \$45,000.

Fla., Tampa.—Ernest Kreher is having plans prepared by Bonfoey & Elliott, Tampa, to erect residence; two stories; brick stucco; will also erect garage in rear; bids for construction will be invited soon.

Fla., West Palm Beach.—Union Congregational Church will erect parsonage. Address The Pastor, Union Congregational Church. (Noted in February to erect \$10,000 edifice.)

Ga., Atlanta.—Pittman Construction Co. will expend \$3000 to erect six-room dwelling; ordinary construction; frame; plans and construction by owner. (Recently noted under "Stores.")

Ga., Atlanta.—Henry De Givie will erect residence in Ansley Park.

Ga., Atlanta.—Dr. Thornwell Jacobs will erect residence in Ansley Park.

Ga., Athens.—C. B. Griffith will open bids June 1 to rebuild dwelling; 10 rooms; brick; cost \$10,000. (Recently reported burned.)

Ga., Newman.—N. L. North has plans for erection of residence on Greenville St.

Ga., Statesboro.—J. A. McDougall will open bids May 1 to erect dwelling; two stories; 44x56 feet; mill construction; fireplaces; electric lighting; cost \$6000 to \$7000; plans by W. B. Camp, Jacksonville, Fla. (Recently noted.)

Ga., Wrightsville.—E. E. Daley will erect residence.

Ky., Pineville.—Dr. Edw. Wilson will rebuild burned dwelling on Pine St. (Lately reported burned under Middlesboro, Ky.)

Ky., Pineville.—George Elliott will rebuild

burned dwelling and store on Pine St.; two stories; brick; 30x70 feet. (Lately reported burned under Middlesboro, Ky.)

La., New Orleans.—W. S. Dirker, 3904 Camp St., has plans by H. F. Hinricks, New Orleans, for dwelling; 32x50 feet; cost \$5090; bids closed. (Recently noted.)

La., New Orleans.—Arthur McGuirk will erect dwelling on Audubon Blvd., near Oak St.; two stories; frame; cost \$7000.

La., New Orleans.—Mrs. E. M. Deltry will erect dwelling on Johnson St.; two stories; cost \$3524.

La., New Orleans.—J. C. Nuccio will erect residence on Palmer Ave.; cost about \$3000.

La., New Orleans.—Suburban Homestead Association will erect two-story residence on Canal St.; cost \$7084.

La., New Orleans.—Congregation Notre Dame de Lourdes will erect two-story residence on Napoleon Ave.; cost \$5200.

Md., Anne Arundel County.—Stephen J. Van Lill, secretary of S. J. Van Lill Company, 809-821 Granby St., Baltimore, has purchased site on Severn River and will erect residence, boat and bathhouse, etc.; dwelling will be 50x70 feet; ordinary construction; hot-water heat; gas lighting; concrete walks; cost \$10,000; plans by owner; no contracts.

Md., Baltimore.—Charles Herbold & Son, 1121 Stockholm St., will erect two dwellings on Cleveland St. near Stockholm; two stories; brick; 13x42 feet; furnace heat.

Md., Baltimore.—Peabody Building Co., Maryland Ave. and 29th St., has plans by John R. Forsythe, 232 St. Paul St., Baltimore, for 17 dwellings; 18x65 feet each; cost \$5000 each; construction by owner.

Md., Baltimore.—George A. Blake has plans by J. Appleton Wilson, 800 Law Bldg., Baltimore, for eight dwellings; hot-water heat; electric lighting; construction by owner; subcontracts let.

Md., Baltimore.—Jesse Rosenfeld, manager New York Clothing House, Baltimore and Light Sts., will erect residence on Oakford Ave., between Eldorado and Leona Aves., West Arlington.

Md., Baltimore.—George R. Morris, 810 Equitable Bldg., has plans for cottage on Chatham Rd., between Cleveland and Garrison Aves.; two and one-half stories; frame; 27x30 feet; hardwood furnishings.

Md., Baltimore.—Seth Linthicum, 217-19 St. Paul St., and Jos. L. White, 28 South Broad way, have plans by Charles Broring, 9 N. Potomac St., Baltimore, for nine dwellings on Falt Ave.; two stories; brick; 14x41 feet; cost \$10,000; construction by Mr. White as above.

Md., Baltimore.—Daniel Donnelly, 1200 Montford Ave., is having plans prepared by Howard Hill, 11 E. Pleasant St., Baltimore, for 12 two-story brick dwellings; iron-spot brick; 13x45 feet; cost about \$13,000.

Md., Baltimore.—Dr. Theodore Cooke, 914 N. Charles St., has plans by Jacob F. Gerwig, 210 E. Lexington St., Baltimore, for six dwellings on 31st St. near Harford Rd.; 24x38 feet; iron-spot brick; cost about \$2000 each.

Md., Bowie.—August C. Schmidt will erect several dwellings on lots 40x100 feet; construction will not begin until summer.

Md., Howard County.—Daniel M. Murray, Lawyer's Hill, Howard county, will expend \$4000 for alterations and additions to dwelling; 26x35 feet; ordinary construction; hot-water heat; electric lighting; plans by George Worthington, Law Bldg., Baltimore, Md.; bids opened. (Recently noted.)

Md., Ruxton.—F. L. Carter is having plans prepared by Glidden & Friz, Glenn Bldg., 16 St. Paul St., Baltimore, Md., to erect cottage at Ruxton; two and one-half stories; frame and stucco; interior hardwood and parquetry floors; contractors estimating are Gladfelter & Chambers, 202 Woodberry Ave.; the Roland Park Company, 404 Roland Ave., Roland Park; John F. Kunkel, 413 King St.; Willard E. Harn Company, 213 N. Calvert St., all of Baltimore, and Philip Watts, Pikesville, Md.

Md., Walbrook.—Young O. Wilson, 2946 Clifton Ave., will erect dwelling on Elsinor Ave., between Piedmont and Alto Aves.; two and one-half stories; frame.

Miss., Bellhaven.—I. W. Lampton and L. L. Lampton purchased 10 acres of land and will erect residences to cost not less than \$2000 each.

Mo., Kansas City.—Dr. Frank J. Hall will erect \$25,000 residence.

Mo., St. Louis.—Rev. T. G. Brand, 2655 Pearl Ave., will erect residence; two and a half stories; cost \$7000.

Mo., St. Louis.—W. H. Langdale, 2819 Union Blvd., will erect one-and-a-half-story dwelling; cost \$4000.

Mo., St. Louis.—Mrs. S. A. Shepard, 3465 Morgan Ford Rd., will erect dwelling; one story; cost \$3000.

Mo., St. Louis.—Dr. C. H. Allen will erect dwelling and office on St. Louis Ave., between 23d and 25th Sts.

Mo., St. Louis.—Ningua Realty & Building Co., 4142 Flora Blvd., will erect two-story dwelling; cost \$5000.

Mo., St. Louis.—Viola Brockett, 2625 Ecoff Ave., will erect two-story store and dwelling.

Mo., St. Louis.—Thomas Morgan, 2212 Utah St., will erect two-story dwelling; cost \$3850.

N. C., Concord.—J. F. Cannon will receive bids in about two weeks to erect dwelling; 52x85 feet; 15 rooms; 5 baths; frame; slate roof; hot-water heat; electric lighting; cost \$15,000; plans by Louis H. Asbury, Charlotte, N. C. Address architect. (See "Machinery Wanted.")

N. C., Durham.—Dr. B. W. Fassit will erect residence on Watts St.

N. C., Hamlet.—Fred Lackey will erect residence on S. High St.; cost \$10,000.

N. C., Hertford.—W. R. White will expend \$4000 to erect dwelling recently noted; 40x60 feet; ordinary construction; electric lighting. (See "Machinery Wanted.")

Okla., Oklahoma City.—Mrs. K. L. Smith, 1222 E. 12th St., will erect two-story frame dwelling; cost \$4000.

S. C., Columbia.—Cora L. Summersett will erect three dwellings on Lincoln St., between 1st and 2d Sts.; seven rooms; cost \$3600.

Tenn., Chattanooga.—O. E. Curry will erect residence on 11th St.; two stories; 16 rooms; brick; cost \$6000.

Tenn., Chattanooga.—J. D. Hudson, 123 Oak St., is having plans prepared by J. G. Barnwell and Clarence T. Jones, Chattanooga, for dwelling; two stories; brick; metal roof; cabinet mantels; hard pine interior finish; gas and electric lighting; cost \$5000.

Tenn., Nashville.—E. H. Bullock will erect residence at 1105 Belmont Ave.; brick veneered; cost \$4500.

Tex., Austin.—William F. North will erect dwelling on San Antonio St.; two stories; brick; cost \$8000.

Tex., Calvert.—C. C. Somers will erect residence.

Tex., Orange.—Methodist congregation will erect parsonage at corner Elm and 6th Sts.; cost \$3000. Address The Pastor, Methodist Church.

Tex., Victoria.—Presbyterian congregation has plans by Hull & Praeger, Victoria, Tex., for manse. (Recently noted.)

Va., Altavista.—H. A. Dudley is having plans prepared by McLaughlin & Johnson, Lynch Bldg., Lynchburg, Va., for dwelling; colonial style architecture; slate roof; vapor heat; cost \$5500.

Va., Norfolk.—Henry Wales has plans by B. F. Mitchell, Norfolk, for dwelling; two and a half stories; veneer brick; hot-water heat; cost \$12,000.

Va., Petersburg.—Howard James & Co. will erect two residences; electric lights; cost \$6000; nine rooms each; stoves and grates; construction begun by company.

W. Va., Wheeling.—Ed Minser will erect dwelling on Wheeling St., Loveland.

### GOVERNMENT AND STATE

Ala., West End, Station Birmingham.—Mine Rescue Station.—Department of the Interior, Washington, D. C., will receive bids in duplicate through Bureau of Mines, 25 Potter Bldg., Birmingham, until 2 o'clock April 28 to erect mine rescue station building; plans and specifications at office of Bureau of Mines, Birmingham, or from J. A. Holmes, director of bureau at Washington, D. C. (Recently noted to receive bids until March 14.)

Fla., Fort Pickens.—Officers' Quarters.—Government opened bids to erect officers' quarters; W. C. Pease of Mobile, Ala., is lowest bidder at \$10,204.

Fla., Fort Barrancas.—Storehouse and Bakery.—Constructing Quartermaster at Fort Barrancas will receive bids in triplicate until 11 A. M. May 4 to remodel quartermaster and subsistence storehouses into subsistence storehouse and bakery; bids for work complete, including plumbing, electric wiring and fixtures; plans, specifications and blanks on deposit of \$5.

Md., Crownsville.—Hospital.—Managers State Hospital for Colored Insane, Austin L. Crothers, Union Trust Bldg., Baltimore, Md., chairman of board, is having plans prepared by Baldwin & Pennington, 601 Professional Bldg., Baltimore, Md., to erect hospital building; \$100,000 appropriated by Legislature for site and buildings. (Previously mentioned.)

Mo., Warrensburg.—Postoffice.—Treasury Department, Office of Supervising Architect, Washington, D. C. Sealed proposals will be received at this office until 3 P. M. May 22, and then opened, for construction, complete (including plumbing, gaspiping, heating apparatus, electric conduits and wiring), of United States Postoffice at Warrensburg, in accordance with drawings and specifications, copies of which may be obtained from custodian of site at Warrensburg, or at this office, at discretion of Supervising Architect.

Tenn., Nashville.—Industrial School.—A. B. Baumann of Knoxville, Tenn., has prepared plans for erection of State agricultural and industrial school for negroes; cost about \$75,000.

Va., Fort Monroe.—Hospital.—R. H. Richardson & Son, Hampton, Va., are lowest bidder at \$13,000 for construction of isolation hospital; Charles T. Taylor, Hampton, Va., is lowest bidder at \$3061 for plumbing and heating, and Samuel J. Watson, Jr., Hampton, Va., is lowest bidder at \$430 for electrical wiring; R. B. McBride, Captain and Quartermaster. (Lately mentioned.)

W. Va., Charleston.—Postoffice.—Treasury Department, Office of Supervising Architect, Washington, D. C. Sealed proposals will be received in this office until 3 P. M. May 16, and then opened, for extension, remodeling, etc. (including plumbing, gaspiping, electric conduits and wiring), of United States postoffice at Charleston, W. Va., in accordance with drawings and specifications, copies of which may be obtained from custodian of building at Charleston or at this office, at discretion of Supervising Architect.

W. Va., Charleston.—Sanitarium.—State Board of Control will erect tuberculosis sanitarium to cost \$30,000; site not selected; James S. Lakin, president.

W. Va., Salem.—Girls' Home.—State Board of Control has plans by H. Rus Warner, Charleston, W. Va., for dormitory for girls' industrial school; fireproof construction; steam heat; gas lighting; has appropriation of \$25,000; plans will be completed within 60 days. (Recently mentioned.)

### HOTELS

Ark., Monticello.—J. L. Allen will receive bids until April 15 to erect hotel for Allen Hotel Co.; plans and specifications at office of Theodore M. Sanders, architect, 709-19 Southern Trust Bldg., Little Rock, Ark., or may be had on deposit of \$10.

Ark., Monticello.—Allen Hotel Co. will receive bids until April 15 to erect hotel; plans and specifications on file at office of Theo. M. Sanders, architect, 709 Southern Trust Bldg., Little Rock, Ark.; contractors must deposit \$10 upon application for plans; usual rights reserved.

D. C., Washington.—Wm. C. Smith, Law Bldg., Baltimore, Md., represents capitalists who purchased Johnson Hotel at 13th and E Sts. and will expend at least \$50,000 for improvements.

Fla., Jackson.—W. H. Miller will erect hotel; three stories; brick; stone finishings; electric lights and water from private power plant.

Fla., Jacksonville.—Windle Hotel Co. plans erection of four-story addition and improvements to present structure; pressed brick; 60x111 feet; first floors to be used for stores, upper floors will be connected with present hotel; telephone system; each room to have private bath; C. B. Smith, proprietor.

Fla., Jasper.—W. J. Snell, Lake City, Fla., is preparing plans for hotel; three stories; 90x80 feet; brick; electric lighting; cost \$30,000; date of opening bids not set. Address architect.

Fla., Miami.—Hotel Halcyon Co., W. W. Dillon, president, has purchased and will remodel Halcyon Hotel; will erect two additional stories of Miami rock, enlarge dining-room, etc.; cost of improvements, \$30,000.

Fla., St. Petersburg.—J. J. Farnsworth of Fort Lauderdale, Fla., contemplates erection of hotel.

Fla., Tarpon Springs.—Tampa & Tarpon Springs Land Co., D. F. Conoley, president and secretary, home office, Tampa, Fla., is interested in proposition to erect hotel of 75 to 100 rooms; company's local office, Tarpon Springs.

Ga., Savannah.—Greater Savannah Company will erect hotel; 90x120 feet; 10 stories; fireproof construction; cost \$350,000; plans by W. L. Stoddart, 30 W. 38th St., New York; architect will have plans ready in about 60 days. (Previously noted.)

La., Donaldsonville.—Donaldsonville Hotel Co. incorporated with \$25,000 capital stock; Meyer Leman, president; Emile Sunberry, first vice-president; J. E. Blum, secretary; Charles Maurin, treasurer; will erect hotel



previously noted; three stories; brick; cost \$40,000.

La., Forest Hill.—Mrs. J. E. Collins will erect two-story hotel.

Mo., Clayton.—Auterlieth Hotel Co. will rebuild burned hotel at Meramec and St. Ferdinand Aves.; cost \$50,000.

N. C., Charlotte.—Heath-Houston Realty Co. is having plans prepared for proposed hotel at Lafayette and Franklin Sts.; 82x180; two electric elevators; steam heat; boiler rooms, cold-storage plant, etc., in basement.

S. C., Chester.—T. L. Eberhardt will erect 26-room annex to Carolina Inn; granite and brick.

Va., Chester.—A. Lee Thaw, 10 S. 3d St., will remodel 18-room hotel recently reported purchased.

Va., Mt. Elliott.—Charles B. Cooke will erect addition of 25 rooms to hotel, including new dining-room, ballroom, etc.; present building has 50 rooms.

Va., Richmond.—William Rueger, N. 9th St., is having plans prepared by Louis E. Jalland, 37 Liberty St., New York, for hotel; 11 stories; 53x105 feet; cost \$200,000. (Recently noted.)

### MISCELLANEOUS

Ala., Wylam.—Sanitarium.—W. S. Rountree has plans by D. O. Whildon, Birmingham, Ala., to rebuild sanitarium; to contain 20 beds; fireproof construction; steam heat; electric lighting; cement sidewalks; cost \$15,000 to \$18,000. (Recently reported burned.)

D. C., Washington.—Clubhouse.—Army and Navy Club, 1662 I St. N. W., has plans by Hornblower & Marshall, 1516 H St. N. W., Washington, to erect clubhouse.

Fla., Lake Weir.—Club.—Lake Weir Yacht Club will construct clubhouse; frame; composition roof; cost \$300; plans by George MacKay, Ocala.

Fla., Seabreeze.—Business.—George P. Johnson is having plans prepared to erect business block on Seabreeze Ave. and Coates St.

Ky., Louisville.—Stable.—Belknap Hardware & Manufacturing Co. will erect combined stable and garage; 90x160 feet; fireproof construction; five-ton elevator; plans by George H. Gray, 708 Louisville Trust Bldg., Louisville; will open bids about June 1.

Md., Baltimore County.—Hospital.—James Lawrence Kernan Hospital for Crippled Children is having plans prepared by Butler & Rodman, 16 E. 23d St., New York, for general layout of property at Radnor Park for administration building, cottages for acute and convalescent patients, isolation and operating pavilion, etc.; further information not available at present. (Recently noted.)

Md., Baltimore.—Clubhouse.—Phoenix Club, 1505 Eutaw Pl., contemplates erection of additional building.

Md., Govans.—Greenhouses.—Stevenson Bros. will erect series of greenhouses at Alburt Park.

Mo., Joplin.—Clubhouse.—Riverside Club will erect clubhouse.

Mo., Kansas City.—Hospital.—Christian Hospital Association, J. W. Perry, president (recently noted to erect hospital), will not begin construction of building for several months; plans not made.

S. C., Saluda.—George C. Wheeler will erect structure on N. Main St.; two stories.

Tenn., Memphis.—Stockyards.—H. T. Bruce will rebuild stockyards reported burned, occupied by St. Louis & San Francisco Railroad; one story; frame; 118x118 feet; cost \$10,000.

Tenn., Memphis.—Orphanage.—St. Peter's Orphanage will receive bids until April 12 for erection of addition to asylum; plans and specifications on file at office of Harker & Cairns, architects, 528 Scimitar Bldg., Memphis; estimates will be received on following items separately: Excavating and grading, concrete and cement work, brick work, stone work, tile and metal work, iron work, plastering, dimension lumber, mill work, painting, hardware; usual rights reserved.

Tenn., Nashville.—Hospital.—Dr. R. F. Poyd, proprietor of Mercy Hospital, will rebuild burned structure; estimated cost, \$5000.

Tex., Waco.—Fair Buildings.—Texas Cotton Palace Association, Albert T. Clifton, president, will increase capital stock of company from \$40,000 to \$80,000 and erect additional buildings for fair purposes.

Va., Lynchburg.—Parish-House.—Episcopal Church is having plans prepared by McLaughlin & Johnson, Lynch Bldg., Lynchburg, for parish-house; cost \$15,000. (See "Churches.")

Va., Harrisonburg.—Produce-house.—City Produce Exchange, H. H. Weaver and Em-

manuel Blosses interested, will erect produce-house; three stories; brick; cost \$10,000.

Va., Norfolk.—Musical Conservatory.—Misses Ewell has plans by B. F. Mitchell, Norfolk, for conservatory of music; three stories; 75x120 feet; brick; steam heat; cost \$20,000.

W. Va., Huntington.—Armory.—Biggs-Wilson Company has plans by R. F. Carsons for building to be leased to State for armory; 80x180 feet; one story and basement; front, two stories; back, 40 feet; mill construction; heating and lighting not decided; cost \$900; will open bids. Address architect. (Recently noted.)

### RAILWAY STATIONS

Ga., Willacoochee.—W. C. Shaw, chief engineer Georgia Southern & Florida Railway, Macon, Ga., states that his company will not rebuild station recently reported.

S. C., Barnwell.—Southern Railway Co. D. W. Lum, chief engineer maintenance of way, Washington, D. C., has no plans for passenger station at Barnwell. (Recent report incorrect.)

S. C., Great Falls.—Seaboard Air Line Railway, W. L. Seddon, chief engineer, Portsmouth, Va., contemplates erection of \$10,000 depot.

Tex., Marshall.—Texas & Pacific Railway, B. S. Wathen, chief engineer, Dallas, Tex., will soon begin erection of proposed station.

Va., South Boston.—Norfolk & Western Railway, C. S. Churchill, chief engineer, Roanoke, Va., and Southern Railway, D. W. Lum, chief engineer, Washington, D. C., are reported to erect \$50,000 depot.

### SCHOOLS

Ala., Guntersville.—City is having plans prepared by Runge & Dickey, Nashville, Tenn., for school building; three stories; 77x96 feet; fireproof construction; hot-air heat; cost \$20,000; construction under city's supervision. (Recently noted.)

Ala., Cuba.—City will vote on issuance of \$12,000 bonds to erect school. Address The Mayor.

Ala., Montgomery.—Board of Education of Alabama Methodist Conference is having plans prepared for erection of dormitory for Women's College; estimated cost \$60,000; W. F. Feagin, Montgomery, and M. S. Hosmer of Troy, Ala., are members of Board of Education.

Ark.-Tex., Texarkana.—School Board will expend \$80,000 to erect school building; three stories; 150x170 feet; ordinary construction; fan blast system of heating; plans by Witt, Selbert & Co., Texarkana; date of opening bids not set. (Recently noted.)

D. C., Washington.—Cuno H. Rudolph, John A. Johnston, William V. Judson, Commissioners District of Columbia, will receive bids April 17 to erect Cardozo Manual Training School building at northeast corner of 1st and I Sts. S. W., Washington; blank torium to seat 300. (Recently noted to re-engineer department, Room 427 District Bldg.; deposit of \$10 required.)

Fla., Green Cove Springs.—Board of Public Instruction, Clay county, W. H. Biggs, superintendent, will receive bids until May 2 to erect school; plans, specifications, etc., on file at office of superintendent; bids to be accompanied by certified check for \$10; usual rights reserved.

Fla., Jacksonville.—Board of Public Instruction will erect school at Riverside; 122x42 feet; brick; two stories.

Fla., Sutherland.—Sutherland College, J. P. Hillburn, president, will expend \$30,000 to erect dormitory; concrete construction; tile roof; plans by George MacKay, Ocala. (Recently noted.)

Ga., Blakely.—City will vote April 22 on issuance of \$60,000 bonds for erection of school. Address The Mayor.

Ga., Colquitt.—City voted issuance of \$22,000 of bonds for erection of school building. Address The Mayor. (See "Water-works.")

Ga., Dawson.—City will vote May 10 on \$12,500 of bonds to erect school. Address The Mayor.

Ga., Macon.—Bibb county will vote in fall on \$100,000 bond issue to erect high school building. Address County Commissioners.

Ga., Macon.—Methodist churches, Rev. J. P. McFerrin, presiding elder, plans to erect E. Prentice Peabody Memorial School at Conference Orphan Home.

Ga., Roberta.—City voted \$5000 bond issue to erect school. Address The Mayor.

Ga., Rome.—Board of Education is having plans prepared by Asmus & Norton of Nashville, Tenn., to erect Fourth Ward school and remodel Tower Hill buildings and Shorter

College properties; John T. Wilkerson, chairman of building committee.

La., Pineville.—Louisiana State Baptist Association, C. Cottingham, president, will rebuild Louisiana College, previously reported burned.

La., Tallulah.—Madison parish is having plans prepared by Stephens & Nelson for high-school building; 10 classrooms and auditorium to seat 300. (Recently noted to receive plans until April 4.)

Md., Brunswick.—Frederick County School Commissioners, Frederick, Md., will erect two-room annex to West End school; also erect two-story brick high-school building to contain eight rooms.

Mo., Clarence.—City voted \$25,000 bond issue to erect school. Address The Mayor.

Mo., Kansas City.—Country Day School will erect two-story building; glass-covered veranda.

Mo., Sedalia.—City will vote April 25 on special tax to raise \$12,000 (additional to \$30,000 of bonds recently voted) for the erection of school. Address The Mayor.

Mo., St. Louis.—Rev. J. J. Glennon, 801-03 Mullaphy St., will erect one-story school; cost \$4000.

Mo., Springfield.—Board of regents has not selected architect to prepare plans for addition to State Normal School to be used as auditorium and gymnasium; 84x100 feet; fireproof construction; central heating and lighting plant; cost \$65,000. (Recently noted.)

N. C., Chadbourn.—City will vote May 2 on \$10,000 bond issue to erect school. Address The Mayor.

Okla., Muskogee.—Methodist Board of Education has plans by H. H. Nieman for educational college; will erect three buildings to cost \$150,000; J. B. McDonald will be manager. (This college will be erected in place of Woman's College previously reported.)

Okla., Perry.—Board of Education will let contract April 25 to erect school building; two stories and basement; 80x110 feet; fireproof construction; furnace blast or direct steam heat; cost \$35,000; plans by Van Meter & Schmitt, Oklahoma City, Okla. (Recently noted to receive bids until April 10.)

Okla., Putnam City.—Carey College Development Co. incorporated with \$100,000 capital stock by I. M. Putnam, W. H. Phillips, P. F. Peterson and others to establish Carey College; plans to expend \$100,000 to erect buildings; building already erected has been deeded to college trustees, in addition to 430 acres of land; contract will soon be awarded for completion of dormitory; now accommodating 100; Dr. J. H. Moore is president of college.

S. C., Great Falls.—Sumter County School Board, W. D. Knox, Superintendent of Education, contemplates erection of \$10,000 school.

S. C., Greenwood.—Lander College, G. W. Sullivan, president Board of Trustees, selected T. W. Cothran of Greenwood to prepare plans for three-story dormitory; steam heat; electric lighting; cost \$25,000. (Recently noted.)

S. C., Irmo.—Harbinson College will erect \$50,000 building.

Tenn., Benton.—Polk County Commissioners will expend \$25,000 to erect two schools, one each at Benton and Ducktown, Tenn.

Tenn., Ducktown.—Polk County Commissioners, Benton, Tenn., will erect school. (See Tenn., Benton.)

Tenn., Knoxville.—Knox County High School Board will erect high-school building; eight rooms; slate roof; steam heat; electric lighting; cost \$15,000; architect not selected. (Recently noted to issue \$50,000 of bonds for school buildings.)

Tex., Collegeport.—Collegeport School District will vote on bond issue to erect \$12,000 brick school. Address District School Trustees.

Tex., Dallas.—Dallas County School District No. 54 will vote April 27 on special tax for erection and improvement of schools. Address County Commissioners.

Tex., Grapeland.—City will vote on issuance of \$10,000 bonds to erect school. Address The Mayor.

Tex., Loving.—City voted \$3500 bonds for erecting school. Address The Mayor.

Tex., Tenaha.—City voted \$3500 of bonds to erect addition to school. Address The Mayor.

Va., Lynchburg.—City is having plans prepared by McLaughlin & Johnson, Lynch Bldg., Lynchburg, for White Rock school building; brick; stone and terra-cotta trimmings; Spanish architecture; slate roof; steam heat.

W. Va., Athens.—State Board of Control has plans by H. Rus Warne, Charleston,

W. Va., for rebuilding Concord Normal School; cost \$50,000; will ask for bids. (Recently noted.)

W. Va., Bluefield.—East River District Board of Education will vote on issuance of \$50,000 bonds to erect school.

W. Va., Romney.—State Board of Control will make improvements to school for the deaf and blind at cost of \$13,000; plans not made; James S. Lakin, president.

### STORES

Ala., Brewton.—Cedar Creek Mill Co. will erect brick store building.

Ala., Fayette.—Grimsley Bros. are reported as contemplating erection of several business buildings.

Ala., Mobile.—Gabriel Jewelry Co., 209 Dauphin St., is having plans prepared by McCrary & Slater, 203 Pollock Bldg., Mobile, for store building; 23-foot stone front; reinforced concrete foundations; steel beams and cast-iron columns; English vein Italian marble base; plate-glass name plates; polished plate set in metal sash; mirrors; bevel plate set in hard metal transom across entire front, both exterior and interior; oval plate-glass doors with brass kick plates; removable buttons and holoplane reflectors in show windows; mahogany woodwork; tiled entrance; will soon open bids.

Ala., Fayette.—William M. Cannon will rebuild store; 100x110 feet; two stories; brick or concrete; probably fireproof construction; contract not to be awarded in less than 60 days. (Recently reported burned.)

Ark., Fort Smith.—S. H. Kress & Co., 296 Broadway, New York, will erect store building.

D. C., Washington.—Reginald W. Beall, 1331 G St. N. W., purchased three dwellings at 2406-10 14th St. N. W., and will convert into stores and apartments; cost \$7500.

D. C., Washington.—Perival D. Emmert, 1110 15th St. N. W., and H. V. Boule, 1333 G St. N. W., purchased site on T St., between 7th and 8th Sts. N. W., and will erect seven stores; also site on U St. N. W., and will erect four stores.

Fla., Brooksville.—E. L. C. Johnston will erect business building; 50x36 feet; ordinary construction; stone; cost \$6000. (Recently noted.)

Fla., Jacksonville.—Windle Hotel Co. plans erection of store and hotel; four stories; brick. (See "Hotels.")

Fla., Plant City.—T. M. Strickland will open bids about April 14 to erect store building; two stories; 52½x35 feet; pressed brick; freight elevator; plans by F. J. Kennard, Tampa, Fla. (Recently noted.)

Fla., Plant City.—O. S. E. Mays is ready to receive bids for erection of four stores; one story; 105x100 feet; brick; electric lighting; cement sidewalks; cost \$8500. (Recently noted.)

Fla., St. Petersburg.—C. M. Roser will erect brick store and apartment-house. (See "Apartment-houses.")

Fla., Tampa.—Sarah L. Clarke is having plans prepared by A. L. Shaw, Tampa, for store building; 70x35 feet; two stories; ordinary brick construction; stoves; electric lighting; cost \$75,000. Address architect.

Fla., Tampa.—Thomas Land Co. will construct business building for occupancy of Tampa Hardware Co.; five stories; 26x106 feet; cost \$50,000; will open bids shortly. (See "Land Developments.")

Ga., Wrightsville.—A. J. M. Robinson will rebuild burned store corner Court and Marcus Sts.

Ga., Wrightsville.—U. R. Jenkins will erect brick store building.

Ky., Pineville.—George Elliot will rebuild burned store and dwelling on Pine St. (Lately reported burned under Middlesboro, Ky.)

Mo., Joplin.—Ben Aylor, Webb City, Mo., will erect store building to be occupied by Black Bros. Furniture Co.; three stories; contractors estimating.

Mo., St. Louis.—Viola Brockett, 265 Ecoff Ave., will erect two-story store and dwelling; cost \$5000.

Mo., St. Louis.—Smith Bros. will erect store and apartment building on Delmar, West Gate and Melville Aves.; cost \$60,000. (See "Apartment-houses.")

Mo., St. Louis.—Ben Barnett leased building and will remodel; will install marble and glass front, etc.

N. C., Apex.—Watkins-Seymour Company will erect two-story brick store.

N. C., Asheboro.—J. G. Miller will erect brick store on Depot St.

N. C., Asheboro.—W. J. Miller and H. T. Caviness will erect brick store corner Fayetteville and McDowell Sts.

N. C., Statesville.—W. A. Evans & Co. will erect store building; two stories; 35x50 feet; ordinary construction; elevator to cost \$100; cost of building \$3000; day labor.

Okl., Okemah.—W. H. Dill will expend \$25,000 to erect two stories; 72x100 feet and 48x120 feet; one story; electric lighting; plans and construction by owner. (Recently noted.)

Okl., Oklahoma City.—Dr. J. G. Street of Street & Draper Undertaking Co. will erect additional three stories to building at 212 W. 2d St., occupied by Theodore Maxfield Dry Goods Co.; cost of addition, \$30,000; plans are being prepared.

S. C., Anderson.—H. C. Townsend will erect building; portion to be occupied by Benevolent Protective Order of Elks. (See "Association and Fraternal.")

S. C., Saluda.—John M. Smith will erect double store on Main St.; two stories; brick. Tenn., Johnson City.—M. I. Gump will erect store and theater building on Main St. Tenn., Paris.—T. B. Walker, first vice-president of First National Bank, will erect two stores and theater building; cost \$10,000. (See "Theaters.")

Tex., Brownsville.—B. G. Stegman will erect three-story building; 20x120 feet; will only erect one room at present, 100x120 feet.

Tex., Cuero.—Thornton Hamilton will erect brick business building.

Tex., Houston.—Condos Brothers will probably erect store and office building; 12 stories; fireproof; steel frame; pressed brick construction; basement under entire structure; ornamental dome on twelfth story; lower floor for confectionery; upper floors for offices.

Tex., Longview.—W. F. Nelson reported to erect brick store building.

Tex., Madisonville.—Parten Bros. & Byers will expend \$4000 to erect stone building; 55x100 feet; fireproof construction; date of opening bids not set. (Recently noted.)

Tex., Shiner.—William Green will erect two-story brick business building; 50x130 feet.

Tex., Texas City.—Livingston & Ellis will receive bids until April 17 to erect two-story brick building; 125x110 feet; plans and specifications at office of J. W. Livingstone, Texas City.

Va., Norfolk.—M. L. Hofheimer, Richmond, Va., will erect store and theater on Granby St.; cost \$60,000. (See "Theaters.")

Va., Portsmouth.—Jesse Johnson, Norfolk, Va., is lowest bidder at \$40,700 for steel construction and at \$45,500 for fireproof construction of Kirm Building at High and Court Sts.; four stories; 210x70 feet; plans by B. F. Mitchell, Norfolk. (Recently noted.)

Va., Richmond.—Dr. Jud B. Wood will erect three stores; three stories; brick.

Va., Richmond.—R. L. Peters contemplates erection of several stores.

Va., South Boston.—W. B. Lawson reported to erect two or three-story store to cost \$5000.

### THEATERS

Ga., Blakely.—Gay Bros. will erect \$30,000 opera-house; construction begun.

Md., Hagerstown.—S. W. Kent Miller is reported to erect theater.

Tenn., Paris.—T. B. Walker, first vice-president First National Bank, will erect theater with two stores adjoining; cost \$10,000.

Tenn., Johnson City.—M. I. Gump will erect theater and store building on Main St. (See "Stores.")

Tex., Houston.—H. Fichtenberg, owner of Dixie Film Co., New Orleans, La., has leased site on Prairie Ave., between Main and Fannin Sts., and will erect motion picture theater; 50x125 feet; cost about \$80,000; construction to begin in 30 days.

Tex., San Antonio.—Majestic Theater Co. has acquired plot of ground, 75x140 feet, and will erect theater; reinforced concrete fireproof construction; five stories, with carrying capacity for five additional stories; seating capacity 2500.

Va., Norfolk.—M. L. Hofheimer, Richmond, Va., has plans by C. K. Howell of Richmond to erect theater and store building on Granby St., between Freemason and Charlotte St.; 185x55 feet; theater proper will be 130x55 feet, approached by arcade entrance, on either side of which will be 55-foot stores; seating capacity 1400; cost \$60,000.

Va., Richmond.—Management of Academy of Music plans enlargement of theater.

Va., Richmond.—H. S. Wallerstein will erect theater for Jake Wells and associates; fireproof construction; to seat 1400; cost \$100,000.

### WAREHOUSES

D. C., Washington.—Charles W. King, Jr., 1519 Monroe St. N. W., will erect storage

warehouse on K St. N. W., between 25th and 26th Sts.

D. C., Washington.—Charles W. King, Jr., 1519 Monroe St. N. W., will erect storage warehouse on K St. between 25th and 26th Sts.

Miss., Maben.—John Morton, representing Farmers' Warehouse Co., plans to erect warehouse; cost about \$10,000.

S. C., Union.—Fant Bros. Company has plans by N. T. McKinney, Union, for warehouse; 50x80 feet; fireproof construction; will install elevator; cost \$3500. (Recently noted.)

## BUILDING CONTRACTS AWARDED

### APARTMENT-HOUSES

N. C., Charlotte.—O. A. Robbins awarded contract to C. J. Stinson to erect apartment-house corner Winthrop Ave. and East Boulevard; two stories; eight apartments.

N. C., Charlotte.—Mrs. O. A. Robbins awarded contract to C. J. Stinson, Charlotte, to erect eight apartments; cost \$18,000. (Recently described under "Dwellings.")

Tex., Marshall.—Masonic Lodge, R. P. Littlejohn, president, awarded contract at \$17,224 to L. R. Wright of Dallas, Tex., to erect Masonic lodge building corner Rusk and North Bolivar Sts.; two stories; 60x120 feet; brick; plans by Hubbell & Green of Dallas. (Recently noted.)

Va., Norfolk.—J. F. Kitterman will expend \$4400 to erect apartment-house; mill construction; hot-water heat; mantels and lighting fixtures to cost \$200; contract recently noted (under dwellings) awarded to Charles H. Lowe, 603 Paul-Gale Greenwood Bldg., Norfolk.

### ASSOCIATION AND FRATERNAL

Ala., Birmingham.—Young Men's Christian Association awarded contract at \$137,450 to Joy Construction Co., Birmingham, Ala., to erect building; nine stories, basement and roof garden; French renaissance style; contract for elevators, furnishings, etc., to be awarded later. (Lately mentioned.)

Fla., Tallahassee.—Benevolent and Protective Order of Elks will expend \$10,000 to erect lodge building; 72x98 feet; veneered brick; steam heat; electric lighting; plans by T. F. Lockwood, Columbus, Ga.; contract recently noted awarded to E. C. Gilmore, Tallahassee. (See "Machinery Wanted.")

La., Alexandria.—Benevolent and Protective Order of Elks will expend \$21,000 to erect lodge building; 60x50 feet; ordinary construction; plans by Stevens & Nelson, 1109 Hennen Bldg., New Orleans, La.; contract recently noted awarded to E. T. Elam, Alexandria.

Tex., Longview.—Ancient Free and Accepted Masons awarded contract to D. Fuqua to erect proposed \$10,000 Masonic Temple.

### BANK AND OFFICE

Fla., Jacksonville.—Cohen Bros. awarded contract to Cramp & Co., Philadelphia, Pa., for concrete, terra-cotta and brick work on construction of James building, equipped with electric-light plant, vacuum cleaning system, telephone system, etc. (See "Stores.")

Fla., Lake City.—First National Bank awarded contract to Caldwell Company, Winston-Salem, N. C., to erect bank building; three stories; 95x39 feet; brick; electric lighting; cost \$25,000; plans by W. J. Snell, Lake City, Fla. (Recently noted to receive bids until March 29.)

Ga., Wrightsville.—W. C. Tomkins awarded contract to W. C. Chester to erect additional story to First National Bank.

Md., Cumberland.—Dime Savings Bank, Thomas Finan, president, awarded contract to Aaron May to erect bank and office building on Baltimore St.; two stories; white undressed Georgia marble; interior finish, white marble, mahogany fixtures and bronze grill-work; floor inlaid tiling; will install 100 private safety deposit boxes; plans by Wright Butler. (Previously mentioned.)

Md., Oakland.—Garrett National Bank will expend \$16,000 to erect addition and make alterations to bank building; brick and stone; steam heat; plans by Holmboe & Lafferty, Clarksburg, W. Va.; general contract recently noted awarded to Holbert & Spedden, Fairmont, W. Va., and to A. D. Naylor & Co. of Oakland for plumbing.

S. C., Mayesville.—R. J. Mayes awarded contract to B. E. and Lloyd H. Grandy, Pickens, S. C., to erect bank and store building. (See "Stores.")

Tenn., Columbia.—Hampshire Bank awarded contract to Vaughn Manufacturing Co. of Columbia to erect concrete bank building.

Tenn., Memphis.—Memphis Rice Mill Co., J. D. Marks, now of Crowley, La., president, will build 68x128-foot warehouse for clean rice and 100x200-foot warehouse for rough rice. (See "Miscellaneous Factories.")

Tenn., Memphis.—J. S. Warren, manager Business Men's Club, advises that company is being organized with \$100,000 capital stock to establish rice mill and erect warehouses. (See "Miscellaneous Factories.")

Va., Norfolk.—Tidewater Warehouse Corporation incorporated with \$25,000 capital stock; L. P. Matthews, president; W. F. H. Enos, secretary and treasurer.

Va., Alexandria.—Alexandria Water Co. will expend \$8000 to erect office building; 34x50 feet; fireproof construction; hot-water heat; electric lighting; contract recently noted awarded to Knight & Rodgers, Alexandria.

W. Va., Alderson.—First National Bank of Alderson awarded contract to W. Mason Construction Co. of Hinton, W. Va., to remodel bank; improvements will consist of tiled floors, marble wainscoting, double vault, etc.

### CHURCHES

Miss., Aberdeen.—Methodist Episcopal Church South awarded contract to McCallah & Terry, Columbus, Miss., to erect edifice; brick; stone trimmings, slate roof; plans by R. H. Hunt, Chattanooga. (Recently noted to receive bids until March 30.)

Mo., St. Louis.—Christian Science Church awarded contract to William Sutherland Building & Construction Co. to erect edifice at 3524 Russell Ave.; 80x39 feet; two stories; 16 rooms; cost \$52,000.

S. C., St. Matthews.—Baptist Church awarded contract to Lane & Huggins to erect edifice; cost \$12,000; seating capacity 450; brick construction; plans by Arthur W. Hamby, Columbia, S. C. (Previously noted.)

Tex., Victoria.—Methodist Episcopal Church will expend \$17,000 to erect edifice; 51x103 feet; fireproof construction; hot-air heat; electric lighting; concrete sidewalks; plans by Hull & Praeger, Victoria; contract recently noted awarded to J. W. Sample, Victoria; heating and lighting contracts awarded separately.

### CITY AND COUNTY

Ga., Statesboro.—Fire Stations.—City awarded contract to L. R. Blackburn, Statesboro, to erect fire station; 50x75 feet; ordinary construction; cost \$2000; plans by S. A. Rodgers, Statesboro. (Recently noted.)

Ga., Washington.—Jail.—Wilkes county awarded contract to John H. McKenzie's Sons, Augusta, Ga., to erect proposed jail; steam heat; brick and reinforced concrete; cost about \$20,000; plans by G. Lloyd Preacher, 403-404 Dyer Bldg., Augusta. (Recently noted to receive bids until March 30.)

La., Lake Charles.—Fire Station.—City awarded contract at \$9315 to Delatte & Lagrange of Lake Charles to erect central fire station.

Mo., Kansas City.—Fire Station.—Fire and Water Board awarded contract to Flanagan Bros. Manufacturing Co. to erect two fire stations, one at 2534-36 Prospect Ave., and other at 6900 E. 15th St.; cost of buildings alone, \$11,455. (Recently mentioned.)

Va., Montross.—Jail.—Westmoreland county awarded contract to Pauly Jail Building Co., St. Louis, Mo., to erect proposed jail; cost \$5000.

### COURTHOUSES

Mo., Kansas City.—Jackson County Commissioners, Independence, Mo., Leo M. Gilday, clerk, awarded contract at \$36,922 to L. M. Rowland to complete fifth floor of courthouse and install vault in basement. (Lately mentioned.)

### DWELLINGS

Ala., Birmingham.—Oscar R. Hundley has plans by and awarded contract to S. Scott Joy, Birmingham, to erect dwelling; two stories; eight rooms; ordinary construction; hot-air heat; electric lighting; cost \$16,000. (Recently noted.)

Ala., Gadsden.—Mrs. Kate Bellinger awarded contract to R. T. Moyer to erect dwelling; nine rooms; frame; cost of heating plant \$200; plans by J. T. Smith.

D. C., Washington.—J. S. Gruver, 4015 Georgia Ave. N. W., will erect nine dwellings at 4105 to 4167 7th St.; 543 to 551 Taylor St. and at 4102 and 4104 New Hampshire Ave. N. W.; Thrift Building Co., Union Trust Bldg., Washington, contractors.

D. C., Washington.—Charles L. Shank, trustee, 748 3d St. N. W., will erect two dwellings at 5621 Fitch Pl. and 503 Kaester Pl.; two stories; frame; cost \$2500 each; C. Edgar Webb, architect; C. L. Shank, builder.

D. C., Washington.—William C. Blundon, 15 Rhode Island Ave., will erect seven dwellings at 34 to 46 Adams St. N. W.; two stories; brick; cost \$30,000; owner architect and builder.

D. C., Washington.—Anna J. Miller will erect two dwellings at 2117-2119 LeRoy Pl.; three stories; brick; cost \$26,000; plans by Bond & Brown, 1725 H St. N. W.; C. A. Langley, 310 12th St. N. W., builder, both of Washington.

D. C., Washington.—D. D. Thompson, 1335 F St. N. W., will erect five dwellings at 4139-417 7th St.; two stories; brick; cost \$15,500; owner architect and builder.

D. C., Washington.—W. A. Gieseking, 1990 Biltmore St. N. W., will erect two dwellings at 1950-1952 Biltmore St.; three stories; brick; cost \$24,000; John H. Nolan, contractor, 1413 G St. N. W.

Fla., Ocala.—James Taylor awarded contract to Melver & MacKay, Box 588, Ocala, to erect dwelling; frame; shingle roof; cost \$4000; plans by George MacKay, Ocala.

Fla., Orlando.—J. M. Jackson awarded contract to E. A. Moore, Eustis, Fla., to erect residence; two stories; eight rooms; cost \$8000; plans by F. J. Kennard, Tampa.

Fla., Tallahassee.—Herman Gunter awarded contract to Child Bros., Tallahassee, to erect dwelling; two stories; frame; cost \$2900 to \$3000; plans by Emil Gunter, Boston, Mass. (Recently noted.)

Ga., Barnesville.—Iverson Middlebrooks awarded contract to Barnesville Coal & Lumber Co., Barnesville, to erect residence on Thomaston St. to replace burned dwelling.

Md., Baltimore.—John T. Donohue, 1898 Thames St., has plans by Mason R. Stone, 238 E. Hoffman St., Baltimore, to erect nine dwellings on south side of Fleet St., between Robinson and East Ave.; two stories; brick; 14x15 feet.

Md., Frederick.—Frederick City Development Co., John L. Johnson, Frederick W. Obenderfer, directors, will erect number of dwellings on Waters St.; contract to erect six already awarded to Milton Cutsall for woodwork, and to Elmer McC. Phebus for masonry.

Md., Towson.—J. Harry West, Hanover and Fayette Sts., awarded contract to Louis C. Wood, Govans, Md., to erect dwelling; 41x32 feet; mill construction; cost \$8000; plans by C. M. Andrews, 324 N. Charles St., Baltimore, Md. (Previously noted.)

Mo., Kansas City.—Robert T. Herrick awarded contract to E. R. Davis, 47th and Wayne Ave., Kansas City, to erect dwelling; 40x42 feet; stucco; slate roof; hot-air heat; gas and electric lighting; granite sidewalk; cost \$5500; plans by L. G. Middaugh, 512 Kansas City Life Bldg., Kansas City. (Recently noted.)

Mo., Kansas City.—P. S. Harris has plans by and awarded contract to J. C. Williams, New York Life Bldg., Kansas City, to erect dwelling; 30x53 feet; fireproof construction; stone and tile; hot-water heat; gas and electric lighting; cement sidewalks; cost \$12,000. (Recently noted.)

N. C., Greensboro.—James T. Morehead, Jr., awarded contract to Shaw Bros. to erect double tenement-house; two stories; 12 rooms; basement and attic; fireproof construction; steam heat; gas and electric lighting; slate roof; cost, exclusive of heating and plumbing, \$5000; plans by W. L. Brewer, Greensboro.

N. C., Hamlet.—Baptist congregation has awarded contract to J. F. Dores to erect two-story 7-room parsonage.

Okl., Oklahoma City.—J. J. Culbertson awarded contract to W. O. Wylie, Oklahoma City, to erect dwelling; ordinary construction; brick; tile roof; cost \$15,000. (Recently noted.)

S. C., Clemson College.—W. M. Riggs, president Clemson College, awarded contract to erect three dwellings for professors; cost \$6000.

S. C., Greenwood.—Mrs. Ida V. Klugh awarded contract to C. E. Wilkinson to erect residence on Bailey Circle; two stories; cost \$6000.

S. C., Spartanburg.—Isaac Turner will erect residence on S. Church St.; two stories and basement; 17 rooms; pressed-brick veneer; Spanish style; tile roof; plate glass; hot-water heat; cost (not including equipment), \$11,600; plans by S. P. Tinsley, Spartanburg; contract awarded to Green River Land Co. of Spartanburg. (See "Machinery Wanted.")

Tenn., Chattanooga.—Dan Peglar awarded



contract to G. W. Cobb to erect residence on Vance Ave., between Hawthorne and Hickory Sts.; brick; eight rooms; cost \$3500; construction begun.

Tenn., Chattanooga.—S. Sacks awarded contract to Daneman & Kopin to erect residence on East 9th St., between C and Douglas Sts.; two stories; brick; cost \$3100.

Tenn., Chattanooga.—N. M. Silverman, 511 Cedar St., awarded contract to Dannman & Hopkins to erect two-story brick dwelling; composition roof; cabinet mantels; gas and electric lighting; heating not decided; cost \$4000.

Tenn., Nashville.—Oscar F. Noel has awarded contract for erection of residence in Waverly Pl.

Tex., Palestine.—Henry Lincoln has plans by J. F. Brook, Palestine, for dwelling; 8x12 feet; concrete; red tile roof; cost \$700; date of opening bids not set. (Recently noted.)

Va., Lynchburg.—S. H. Smith awarded contract to Monroe & Adams to erect dwelling; Spanish architecture; stuccoed exterior; red slate or red tile roof; vapor heat; cost \$650; plans by McLaughlin & Johnson, Lynch Bldg., Lynchburg.

Va., Lynchburg.—David T. Edwards awarded contract to W. K. Barger, Lynchburg, to erect proposed colonial dwelling; hardwood flooring; beam ceiling; wainscoting; vapor heat; cost \$5300; plans by McLaughlin & Johnson, Lynch Bldg., Lynchburg.

Va., Lynchburg.—H. M. Sackett awarded contract to W. K. Barger, Lynchburg, to erect two bungalows at Randolph-Macon Heights; outside walls covered with California redwood shingles; porch with stuccoed columns and trellis roof; low-pressure steam heat; cost \$5000; plans by McLaughlin & Johnson, Lynchburg.

Va., Lynchburg.—M. N. Moorman, Jr., awarded contract to W. K. Barger, Lynchburg, to erect addition to dwelling; colonial style; cost \$4000; plans by McLaughlin & Johnson, Lynchburg.

W. Va., Glenwood.—John Mueller awarded contract to J. W. Beltz & Sons, Wheeling, to erect residence; cost \$6000.

N. C., Durham.—John C. Angier awarded contract to Norman Underwood, Duke Bldg., Durham, to remodel dwelling; two and a half stories; 63x72 feet; frame; hot-water heat; electric lighting; basement to contain laundry, dairy-room, etc.; two bathrooms; cost \$8000.

## GOVERNMENT AND STATE

Miss., Brookhaven.—Postoffice.—Government awarded contract at \$50,575 to Stuart & Randall of Oklahoma City, Okla., to erect post-office.

W. Va., Welch.—Hospital.—State Board of Control awarded contract to J. D. Shott Contracting Co., Bluefield, W. Va., to erect addition to Miners' Hospital No. 1, including brick laundry, power-house and barn; cost \$10,000.

## HOTELS

Fla., Eustis.—Burwell & Hillyer, Jacksonville, Fla., have prepared plans and received contract to erect addition to Ocklawaha Hotel; cost \$2500.

Fla., St. Petersburg.—W. H. Lowe awarded contract to J. E. Hamilton to erect hotel; cost \$20,000; plans by A. L. Shaw, Tampa, Fla. (Recently noted.)

Tex., El Paso.—Wm. A. Ulman of New York awarded contract to Wm. Miller & Sons Co., 28 Federal St., Pittsburgh, Pa., to erect hotel; eight stories; cost about \$700,000; plans by Frank M. Andrews, Metropolitan Tower, New York. (Mr. Ulman previously reported as planning to erect this structure.)

## MISCELLANEOUS

Ark., Little Rock.—Fulk estate awarded contract to W. A. Stanton, Little Rock, to erect building to replace burned structure; five stories; 100x140 feet; white enameled brick; terra-cotta trimmings; copper and plate-glass marquee; slow burning; sprinkler system; individual standpipes, with separate connection from fire department; 25,000-gallon water tank on top of building; 50 feet of hose on each floor; cost \$90,000. (Recently noted as having awarded contract for this building.)

Miss., Biloxi.—Clubhouse.—Mississippi Coast Country Club will expend \$10,000 to erect clubhouse; 4x100 feet; frame; fireplaces and low-pressure steam heat; electric lighting; plans by DeBays, Churchill & Labouisse, New Orleans, La.; contract recently noted awarded to T. J. Rosell Manufacturing Co., Biloxi; contracts for plumbing, heating and wiring also awarded.

Mo., St. Louis.—Convent.—Rev. Francis

Brand, 5608 N. Magnolia St., awarded contract to Frederick Wohoff, Magnolia and Old Manchester Sts., St. Louis, to erect proposed convent; 54x35 feet; ordinary construction; steam or hot-water heat; gas and electric lighting; cost \$7000; plans by Joseph Stauder & Sons, St. Louis.

## RAILWAY STATIONS

Fla., Inverness.—Seaboard Air Line Railway Co., W. L. Seddon, chief engineer, Portsmouth, Va., awarded contract to Burwell & Hillyer, Jacksonville, Fla., to erect passenger and freight depot; 30x140 feet; veneered brick; cost \$5000. (Recently noted.)

La., Abita Springs.—New Orleans & Great Northern Railroad Co., N. G. Pearsall, general manager, Bogalusa, La., will expend \$3000 to erect freight and passenger depot to replace burned structure; 25x136 feet; ordinary frame construction; contract recently noted awarded to C. V. Quave, Covington, La.

## SCHOOLS

Md., Baltimore.—Board of Awards, J. Barry Mahool, president, awarded contract at \$123,950 to D. J. Phipps, 237 Coreoran Bldg., Washington, D. C., to erect school No. 70 at Warren Ave. and William St.; three stories; brick; 80x165 feet. (Lately mentioned.)

Md., Highlandtown.—Baltimore County Commissioners, Towson, Md., awarded contract to John Hiltz & Son, 3 Clay St., Baltimore, to erect addition to public school on Clinton St.; two stories and basement; pressed brick and stone; terra-cotta trimmings; hardwood and parquetry floors; cost \$25,000; plans by Thomas L. Jones & Sons, 410 W. Saratoga St., Baltimore.

Md., Lutherville.—Maryland College for Women has awarded contract to John Cowan, 106 W. Madison St., to erect college building to replace burned structure; 131x55 feet; concrete and stone construction; plans by James S. Nussacer, Professional Bldg., Baltimore, Md. (Recently noted.)

Miss., Starkville.—Agricultural and Mechanical College Trustees awarded contract to Koeller & Meredith, 119 W. 7th St., Chattanooga, Tenn., for plumbing and heating in chemical laboratory; college will have about 60 work tables, each table to have connection for water, gas and compressed air; also connection for high-pressure steam and distilled water; building will be steam heated (vacuum system taken from central power plant); cost of building when completed \$50,000; plans by R. H. Hunt, Chattanooga.

Mo., St. Louis.—Committee on school buildings of Board of Education awarded following contracts for additions and alterations to Simmons and Benton schools: For Simmons school—At \$85,182 to Wall Bros., for general work; at \$11,800 to William M. Clancy, for plumbing, etc.; at \$18,628 to Sodeman Heat & Power Co., for heating and ventilating; at \$1995 to Johnson Heat Regulation Co., for heat regulation; at \$4989.95 to International Electric Fixture Co., for electric lighting; at \$1467.50 to Tuee Company, for vacuum cleaning system. For Benton school—At \$29,718 to Wall Bros., for general work; at \$2535 to Henry Doerner, for plumbing; at \$14,175 to Bradley Heating Co., for heating; at \$1195 to Johnson Heat Regulation Co., for heat regulation; at \$3855.50 to International Electric Fixture Co., for electric lighting and wiring; at \$1447.50 to Tuee Company, for vacuum cleaning system. (Lately mentioned.)

Okla., Enid.—School Board awarded contract to Wurster Construction Co., Wichita, Kans., to erect high-school building; 117x205 feet; ordinary construction; reinforced concrete corridors and stairs; fan-blast system of heating; electric lighting; cost \$125,000; plans by R. W. Shaw, Enid. (Recently noted to receive bids until March 22.)

## STORES

Ala., Cullman.—E. E. Cullman will erect three stores; brick; contract awarded to W. A. Shlosser.

Fla., Jacksonville.—Cohen Bros. awarded contract for concrete, terra-cotta and brick work on construction of James building to Cramp & Co., Philadelphia, Pa.; structure will be four stories; 315x215 feet; ground floor, second floor and basement will be occupied by Cohen Bros.; third and fourth floors to contain 126 offices; will install electric-light plant; steam heating; ice-water plant; vacuum cleaning system; complete telephone system; power plant for manufacturing, etc.; plans by H. J. Klutho, Board of Trade Bldg., Jacksonville. (Lately mentioned.)

N. C., Lincolnton.—John K. Cline will expend \$5000 to erect business building; three stories; 30x30 feet; ordinary construction; plans by W. M. Sherill, Lincolnton. (Con-

tract recently noted awarded to George W. McAllister, Lincolnton.)

S. C., Fairfax.—W. E. Harter awarded contract to J. J. Knopf, Fairfax, to rebuild store; 50x80 feet; fireproof construction; stoves; hollow wire system of lighting; cement sidewalks; cost \$4000; ready for occupancy by August 1. (Recently reported burned.)

S. C., Greenwood.—W. A. Collins awarded contract to W. J. Snead Lumber Co., Greenwood, to erect store on Maxwell Ave.; two stories; brick.

S. C., Hartsville.—E. E. Carnes awarded contract to R. Buccannon to erect store and armory building; 48x75 feet; ordinary construction; electric lighting; cost \$6000; plans by Arthur B. Hamby, Columbia, S. C. (Recently noted.)

S. C., Mayesville.—R. J. Mayes awarded contract to B. E. and Lloyd H. Grandy, Pickens, S. C., to erect store and bank building. (See "Machinery Wanted.")

Tenn., Memphis.—Wm. R. Moore Dry Goods Co. awarded contract to Murch Bros. Construction Co. to erect store building; brick-concrete foundations; 18x148 feet; cost \$206,000.

Tex., Brownsville.—Besteiro Bros. will erect \$20,000 store; contract awarded.

Tex., New Braunfels.—Peuffer-Holm Company awarded contract to Chris Herry to erect addition to store building; 40x80 feet; fireproof construction; electric lighting; cost \$7000; plans by Mr. Peuffer. (Recently noted.)

Va., Harrisonburg.—I. S. Ewing and D. S. Hite have plans by and awarded contract to J. S. Heatwole Company, Harrisonburg, for erection of store building; brick walls; pressed brick or granite front; gray stone trimmings; ordinary construction; hot-water heat; electric lighting; freight hand-power elevator; cost \$12,000. (See "Machinery Wanted.")

Va., Lynchburg.—Miss Dora Ford awarded contract to Smoot & Sheehan, Lynchburg, to erect store building; three stories; 23x130 feet; semi-fireproof construction; low-pres-

sure steam heat; electric lighting; concrete sidewalks; cost \$10,000; plans by Frye & Chesterman, Lynchburg. (Recently noted.)

Va., Petersburg.—W. Y. Burge & Co. awarded contract to Harrison Construction Co., Petersburg, to erect business building; three stories.

Va., Roanoke.—T. J. Carter will expend \$6000 to erect store building; 25x95 feet; ordinary and mill construction; plans by Huggins, Bates & Colburn, Roanoke; contract recently noted awarded to J. R. Carter, Roanoke.

## THEATERS

Md., Baltimore.—Louis & Abraham Benesch, 415-17 Gaither Bldg., awarded contract to Thos. B. Stanfield & Son, 109 Clay St., Baltimore, for theater at 1358-60 W. North Ave.; one story; brick; to seat 400; plans by Theodore Wells Pietsch, American Bldg., Baltimore.

## WAREHOUSES

Ky., Louisville.—Muhler & Martin awarded contract to erect warehouse to be occupied by J. I. Case Threshing Machine Co.; 90x182 feet; two stories; ordinary construction; heating not decided; electric lighting; asphalt pavement; 10-ton electric elevator; cost \$16,000 to \$18,000; plans by J. J. Gaffney, Louisville. (Recently noted.)

La., Abbeville.—Planters' Rice Mill Co. awarded contract at \$13,000 to R. J. Montague for erection of two-story brick warehouse.

Md., Baltimore.—Andrew B. McCreery, San Francisco, Cal., awarded contract to Thomas L. Jones & Son, 410 W. Saratoga St., Baltimore, to erect warehouse on Hopkins Pl. at German and Liberty Sts.; six stories and basement; reinforced concrete; 68x120 feet; light brick with Indiana limestone and terra-cotta trimmings; fireproof; two electric elevators; steam-heating apparatus.

Tex., Dallas.—Huey & Philip Hardware Co. awarded contract to Murch Bros. to erect warehouse on Pacific Ave., near Griffin Ave.; four stories, with basement; concrete; cost \$35,000; plans by Lang & Witchell. (Lately mentioned.)

# RAILROAD CONSTRUCTION

## RAILWAYS

Ala., Brewton.—The Elliott Naval Stores Co. of Florida, Ala., it is reported, has let contract to J. N. Gillis & Son of Brewton to build 10 miles of railroad from a point on Black Water Bay, near Milton, toward Brewton.

Ala., Mobile.—Survey is reported begun for the proposed belt line in connection with the plans of the Mobile Terminal Co., of which John T. Cochrane of Mobile is president. Line is to run from Farmers Island via Magazine Point and Plateau to the property of the North Mobile Development Co. Construction to begin soon.

Ark., Fort Smith.—The City Council has passed the ordinance for the proposed union station to be used by the Kansas City Southern and the St. Louis & San Francisco railroads. C. E. Johnston is chief engineer of the Kansas City Southern at Kansas City, Mo., and M. C. Byers is chief engineer of the Frisco at St. Louis, Mo.

Fla., Pensacola.—The Gulf, Florida & Alabama Railroad, according to a report quoting Roy C. Mezargel, 5 Nassau St., New York, promoter of the plan, will build from Pensacola, Fla., to Jasper, Ala., about 265 miles, with a branch from Cantonment to Bay Minette, Ala., 40 miles. Connection will be made at Muskogee, Fla., with the Southern States Lumber Co.'s road, about 60 miles long, which will be part of the main line. Two large bridges over the Alabama and Warrior rivers will be required. Large yards and other terminal facilities will be built at Pensacola. George A. Berry of New York is engineer of construction; offices in the Brent Bldg. at Pensacola.

Fla., Point Washington.—The Choctawhatchie Lumber Co., it is reported, has let contract to J. N. Gillis & Son of Brewton, Ala., to build 10 miles of standard gauge railroad from Point Washington toward Chipley.

Fla., St. Petersburg.—J. J. Farnsworth of Fort Lauderdale, who is interested in real estate at St. Petersburg, is reported working on a plan to build an electric railway from St. Petersburg to John's Pass, seven miles.

Ga., Atlanta.—Contract is reported awarded by the Atlanta & Carolina Railway Co. to Adams & Sturm of Columbia, O., to build the first section of the proposed line between Atlanta and Conyers, Ga. M. Mason is president and general manager at Atlanta.

Ga., Adel.—The Adel Lumber Co., of which Capt. H. H. Tift of Tifton, Ga., is a leading stockholder, is reported considering plans to extend its railroad to Pavo and Thomasville, Ga. Line is now 15 miles long.

Ga., Atlanta.—Concerning the proposed improvements between Atlanta and Macon, an officer of the Southern Railway says that contract has been awarded to C. W. Lane & Co. of Atlanta for lap sidings at Locust Grove, McDonough, Flippin, Stockbridge, Ellenwood and Roseland; also to M. M. Elkan of Macon for similar sidings at Jenkinsburg, Dames Ferry, Juliette, Berner, Holton, Jackson and Floyville, Ga.

Ga., Atlanta.—The Atlanta & Northwestern Railway Co., which proposes to build an electric road to Roswell, Alpharetta, Crichton and Cumming, Ga., has applied for franchise in Atlanta. Right of way from Atlanta to Roswell is reported two-thirds secured. Officers are John M. Ponder of Forsyth, Ga., president; John L. Murphy, vice-president; Robert P. Jones, secretary and counsel, the last two being of Atlanta.

Ga., Savannah.—J. R. Kenly, vice-president and general manager of the Atlantic Coast Line, is quoted as saying that additional tracks will be built between the intersection of the union station tracks and Ogeechee Road to a point east of the yards south of Southover Junction. Together with other improvements about \$200,000 will be spent. E. P. Pleasants is chief engineer at Wilmington, N. C.

Ky., Covington.—Thrasher & Gunter of Knoxville, Tenn., it is reported, have been given contract to build new yards near Cincinnati for the Louisville & Nashville Railroad. The yards will be, it is said, about two miles long, and will cost more than \$350,000. About 700,000 cubic yards of earth and stone will have to be moved. The same firm is also reported working on the construction of a tunnel for the same road between Lexington and Latonia, Ky. W. H. Courtenay, Louisville, Ky., is chief engineer.

Ky., Mt. Sterling.—One of the interested parties says there is nothing definite to report concerning the Mt. Sterling Short Line, which it is said will build a line to either Paris, Cynthia or Carlisle, Ky. See Manufacturers Record of March 9.

Ky., Paducah.—James Campbell, Jr., and Chas. C. Baldwin, the latter of Centra, Ill., have, it is reported, applied to the fiscal

count for franchise for the proposed electric railway from Paducah to Lone Oak.

Ky., Pikeville.—The Levisa Railroad Co. is reported to have filed incorporation articles to build a line from Ward Station, on the Big Sandy division of the Chesapeake & Ohio Railway, through Pike county about 15 miles to the Virginia boundary to open up coal fields. H. Pierce, engineer of construction of the Chesapeake & Ohio at Richmond, Va., may be able to give information. The incorporators and stockholders are reported thus: G. B. Wall, Decatur Axtell, E. W. Grice and A. Trevett of Richmond, Va.; Lee Wright Browning of Maysville, Ky.; F. A. D. Wallace of Louisa, Ky., and J. A. Fox of Ashland, Ky. It is said that the line will be continued along the Levisa Fork to Grundy, in Buchanan county, Virginia. The incorporators are all or nearly all officers of the Chesapeake & Ohio.

Ky., South Portsmouth.—The Chesapeake & Ohio Railway, says a dispatch, will build a bridge across the Ohio River to Portsmouth, O., immediately. H. Pierce is chief engineer of construction at Richmond, Va.

La., Delhi.—W. E. Monroe, president of the Delhi, Providence & Gulf Railroad, says it is proposed to build 250 miles from Lake Providence to Sabine Pass, La., via Delhi, Winnboro, Alexandria and Gulf. Survey not yet completed. Not decided when construction bids will be received. Route is through mostly level country. W. Spires is vice-president and W. S. Buchanan secretary and treasurer.

La., Bastrop.—The Bastrop & Lake Providence Railroad Co. is reported chartered to build between the two points named, 40 miles; capital \$100,000. J. H. Allen is president and R. Morris secretary.

La., New Iberia.—The Iberia, St. Mary & Eastern Railway Co., says an officer, will open bids within the next two weeks for construction. Route is 52 miles from New Iberia to Berwick, La., via Jeanerette, Charenton, Franklin and Patterson, including two draw span bridges of 150 feet each across Bayou Teche near Charenton and Franklin. F. M. Welch is president; H. N. Pharr, treasurer, and H. A. Genung, chief engineer, all at New Iberia, La.

La., New Orleans.—W. L. Park, vice-president and general manager of the Illinois Central Railroad, is quoted as saying that about \$1,000,000 will be spent for improvements this year in the vicinity of New Orleans. The line will be double-tracked between Ponchatoula and New Orleans, while the grades between the latter point and Metairie City will be revised. Work is started. A. S. Baldwin is chief engineer at Chicago, Ill.

Md., Baltimore.—An official of the Maryland & Pennsylvania Railroad confirms report that it is contemplated to rearrange the North Ave. yard this year, but he says the plan has not yet assumed definite shape. J. S. Norris is general manager at Baltimore.

Md., Baltimore.—The Western Maryland Railway Co. has bought a block of 98 buildings bounded by Hillen, High and Front Sts., and adjoining Hillen Station, and will, it is announced, build a new Hillen Station, which is the downtown terminal, and a large office building. The Hillen yards will be enlarged and rearranged. B. F. Bush is president and H. R. Pratt chief engineer at Baltimore, Md.

Md., Baltimore.—The Board of Estimates and the Board of Public Improvements of the city have approved the plans of the Philadelphia, Baltimore & Washington Railroad to lower its tracks at Lafayette Ave., and to carry the street over the line. Ganable Latrobe is general agent of the company at Baltimore, Md., and A. B. Clark is principal assistant engineer at Wilmington, Del.

Md., Hagerstown.—The Hagerstown & Clearspring Railway Co., says a dispatch, will build its proposed line from Hagerstown to Clearspring, 12 miles, this coming summer and will have it in operation by next fall; capital stock \$200,000; bonds \$250,000; directors, Loren N. Downs of New York and Hagerstown, president; Hugh L. Kirby of Harper's Ferry, W. Va., secretary; Alexander R. Hagner, James B. Kreps and Oscar D. Bower of Hagerstown.

Md., Twiggstown.—Howard Buchanan is reported building a narrow-gauge railroad from Buchanan Junction to a point near Spring Gap, where it will connect with the Western Maryland Railway.

Miss., Meridian.—The Meridian & Deep Water Railroad Co. has applied for charter to build a line about 40 miles long from Meridian eastward to the Tombigbee River in Choctaw county, Alabama. The incorporators are C. F. Scofield and S. A. Neville of Meridian, Miss., and W. C. Stowell of Chicago, Ill. The Governor has authorized the company and it will be organized. A large system is said to be behind it.

Mo., Springfield.—Survey is reported com-

pleted for the proposed Springfield & Western Railway from Springfield to Carthage, Mo., about 90 miles, via Paris Springs, Mt. Vernon, Hoberg, Freistatt, Monett, Pierce City, Wentworth and Diamond. J. I. Woodfill is trustee. H. D. Mackay is reported as president and M. M. Hollenback chief engineer.

Mo., St. Joseph.—The St. Joseph & Savannah Interurban Railway, which connects the two points named in its title, is reported completed and has begun operation. It is contemplated, says a dispatch, to extend it to connect with a line from Des Moines, Iowa.

Mo., St. Louis.—The Frisco system, says a report from New York, has sold \$7,000,000 of general lien 5 per cent. 15-20-year bonds to a French syndicate, and while most of the issue will be used for refunding, there will be \$1,557,000 for additions and betterments. M. C. Byers is chief engineer at St. Louis, Mo.

N. C., Bolton.—An officer of the Waccamaw Lumber Co. says that it has no intention of extending its road from Makatoka to Southport at present. This denies a recent press report.

N. C., Charlotte.—Irwin, Hart & Co. of Knoxville, Tenn., are reported to have given a subcontract for four miles of grading on the Piedmont & Northern Railway near Pelzer, S. C. A. V. Miller and T. L. Nelson of Lenoir, N. C., will have a subcontract near Gastonia, N. C., and Hoffman & Sudderth of the same place will do some of the concrete work. J. R. Ervin of Lenoir is reported to have a subcontract on the line in South Carolina.

N. C., Charlotte.—The Piedmont Traction Co., W. S. Lee, vice-president, will let contracts April 20 for bridges over the main Catawba River and the South Fork of the Catawba, in North Carolina, and over the Reedy and Saluda rivers in South Carolina. Address Charlotte, N. C.

N. C., Durham.—Preliminary survey for the Durham & Danville Railroad, to be 51 miles long from Durham, N. C., to Danville, Va., will, it is reported, be started immediately by Gilbert C. White, engineer.

N. C., Denver.—A meeting has been held looking toward the construction of an electric railway to connect Denver, Triangle, Lowesville and Mount Holly, about 20 miles; Dr. H. N. Abernethy, chairman; R. E. Proctor, secretary. Others reported interested as a committee are W. C. Proctor of Denver, R. Nixon of Triangle and I. C. Love of Lowesville.

N. C., Salisbury.—Thos. J. Jerome, one of the parties interested in the company, telegraphs confirming the report that W. J. Oliver and associates of Knoxville, Tenn., have purchased an interest in the Salisbury & Spencer Railway Co., which will immediately connect the street railways of Salisbury and Concord by building an interurban line 22 miles long, with W. J. Oliver as contractor; estimated cost of construction \$500,000. Those jointly interested with Mr. Oliver are E. G. Oates, president of the Mechanics' Bank & Trust Co. of Knoxville; T. A. Wright, attorney and banker of the same city, and John M. Beall, general passenger agent of the Mobile & Ohio Railroad at St. Louis. Until the deal the controlling stock of the railway was owned by W. F. Snider, M. L. Jackson, T. H. Vanderford and Thos. J. Jerome of Salisbury, and T. D. Maness of Concord, N. C.

N. C., Salisbury.—The W. J. Oliver Company of Salisbury is chartered to build, own and operate railroads using electric, gas, gasoline, steam or other motive power; authorized capital stock \$200,000; may begin business when \$100 is subscribed. Stockholders include W. J. Oliver of Knoxville, Tenn.; Hayden Clements and Thomas J. Jerome of Salisbury. The company probably has to do with the proposed extension of the Salisbury & Spencer Railway to Concord.

N. C., Thomasville.—Cushman & Strong of Tryon, Ga., are reported surveying for the proposed Appalachian Interurban Railway, which was promoted some time ago, says a dispatch, "by the late T. C. McNeely."

Okla., Clinton.—The Clinton & Oklahoma Western Railway is reported to have completed arrangements to continue construction from Butler into the Texas Panhandle. C. C. Godman of Fort Smith, Ark., and others are interested.

Okla., Guthrie.—The Guthrie-Fairview Construction Co., which proposes to build the Guthrie, Fairview & Western Railway, is reported to have filed amended incorporation articles; capital \$10,000. Directors are W. C. McCaul, H. G. Hermilink and Nora E. McCaul of Kansas City; R. L. Dryer of Joliet, Ill., and W. C. McKee of Oklahoma City.

Okla., Miami.—M. C. Harper, secretary and general manager of the Oklahoma, Kansas & Missouri Railway Co., writes that W. T. Mc-

Caskey, care of Rail Joint Co., Railway Exchange Bldg., Chicago, Ill., is contractor for the line, which will be 35 miles long from Hattenville, Okla., to Columbus, Kans., and Joplin, Mo., via Lincolnville, Okla., Baxter Springs, Riverton and Galena, Kans. A steel bridge, 200-foot span, will be required over Spring River at Riverton, Kans., and a small one over Tar Creek, near Hattenville, Okla. There will also be 1800 feet of trestle. W. K. Palmer, Kansas City, Mo., is chief engineer. Mr. McCaskey is vice-president, and William Houk of Joplin, Mo., president and treasurer. Directors consist of the last two, Mr. Harper and Dr. W. L. McWilliams of Miami and Franklin M. Smith of Joplin.

Okla., Oklahoma City.—J. H. Johnston, secretary-manager of the Chamber of Commerce, writes that the Oklahoma City Railway Promotion Co. may promote a railroad, and again it may not. If a line is built, it will run from the extreme southeastern portion of Oklahoma to the extreme northwestern portion via Oklahoma City.

Okla., Pawhuska.—Survey and estimates are reported complete for a contemplated change of route of the Missouri, Kansas & Texas Railway through the Osage Nation via Pawhuska. S. B. Fisher is chief engineer at St. Louis, Mo.

S. C., Columbia.—Reported that Lane & Co. of Atlanta have secured a contract for additional work on trestles of the Seaboard Air Line near Columbia.

Tenn., Englewood.—The Athens & Tellico Railway, it is reported, will spend about \$20,000 for improvements at Englewood, and surveys are being made. J. B. Wright is president at Athens, Tenn.

Tenn., Jackson.—R. M. Hall writes that Tuesday, April 11, was the date set for opening bids for the construction of the Birmingham & Northwestern Railroad from Jackson to Myersburg, Tenn. Contract may soon be awarded. Line will be 48 miles long, and will require 400,000 cubic yards of earth work, clearing 85 acres, about 3000 linear feet of trestles and 2700 linear feet of 24-inch pipe. The Jackson Construction Co. is in charge.

Tex., Dallas.—The Southern Traction Co. confirms reports of its recent organization to build from Dallas to Waxahachie and Waco, and also to Corsicana, about 135 miles. J. F. Strickland of Dallas is president.

Tex., Galveston.—Receiver T. J. Freeman wires that no such improvement is contemplated by the International & Great Northern Railroad as the building of terminals to cost about \$1,000,000 on the bay shore, about 20 miles north of Galveston, which was recently reported.

Tex., Trinity.—The Beaumont & Great Northern Railroad is reported to have completed and put in operation an extension from Trinity to Weldon, Tex., about 15 miles.

Tex., Waxahachie.—Survey is reported begun by the Fred A. Jones Construction Co. of Dallas for the proposed line of the Southern Traction Co. from Waxahachie to Waco. J. F. Strickland of Dallas is president of the Traction Company.

W. Va., Elkins.—An officer of the Coal &

Coke Railway writes that grading was nearly completed last year on the line between Roaring Creek Junction and Elkins, and four miles of track put in operation, including one bridge. He does not know when grading will be resumed, but not more than six or eight weeks will be required to complete the remaining four miles. Masonry for the other bridge is nearly done.

W. Va., Huttonsville.—The Wilson Lumber Co., says a dispatch from Elkins, W. Va., has purchased timber lands south of Huttonsville and will build a railroad to develop them.

W. Va., Ward.—The Kellys Creek Colliery Co. of Ward has, it is reported, begun surveys and plans for an extension of its railroad for two and one-half miles.

## STREET RAILWAYS

Ala., Gadsden.—B. T. Head of Birmingham is reported planning to build an electric railway connecting the property of the Plant City Realty Co., Gadsden, Attalla and Alabama City, besides various suburbs.

Ark., Eureka Springs.—Dispatches report the sale of the Eureka Springs Electric Railway and affiliated properties to E. F. Ackerman of Chicago, Hugo Seidel of Eureka Springs and others. Improvements may be made.

Ky., Paducah.—A city ordinance has been approved for the sale within 30 days of a franchise for a street railway from Broadway and 19th St. along the latter and other streets to Oak Grove Cemetery; also on Broadway from 1st to 19th Sts. James P. Smith is Mayor and Maurice McIntyre City Clerk.

N. C., Charlotte.—The Charlotte Railroad Rapid Transit Co. is reported to be pushing construction of its proposed street railway through the lands of the Eastern Heights Company and to the Mecklenburg Country Club. Paul Chatham and others are interested.

N. C., Hendersonville.—R. W. Thomas of Atlanta is reported negotiating with the Osceola Lake Co. for the construction of a street railway from the passenger depot to the lake, a distance of several miles.

S. C., Spartanburg.—F. B. Jennings of Pittsburg, New York, a director of the Spartanburg Railway, Gas & Electric Co., is reported saying that the board is contemplating building an extension through Whitney Mills. F. H. Knox is vice-president and general manager.

Tenn., Jackson.—The Jackson Railway & Light Co., says a dispatch, contemplates building a street railway through West Jackson.

Tex., Longview.—A letter says that the City Council has granted to J. C. Turner, Sr., and others a franchise for an electric street railway, construction to begin within 60 days.

Tex., San Angelo.—J. D. Sugg of San Angelo, says a dispatch, has purchased the San Angelo Street Railway, which was sold at auction to satisfy a \$28,000 mortgage.

## MACHINERY, PROPOSALS AND SUPPLIES WANTED

Manufacturers and others in need of machinery or supplies of any kind are requested to consult our advertising columns, and if they cannot find just what they wish, if they will send us particulars as to the kind of machinery or supplies needed we will make their wants known free of cost, and in this way secure the attention of manufacturers and dealers throughout the country. The Manufacturers Record has received during the week the following particulars as to machinery and supplies wanted.

Automatic Gates.—Cedric R. Boulton, The Abbey Manor, West Kirby, Cheshire, England, wants addresses of manufacturers of automatically-opened gates for vehicles.

Automobiles.—Finocchiaro & Cambareli, Via Ogninella N. 12, Catania, Italy, wants to correspond with dealers in automobiles with view to agency.

Automobile Trucks.—H. M. White, Dillwyn, Va., wants catalogues and prices from manufacturers of automobile trucks for hauling wood, lumber, etc., over country roads.

Bank Furniture.—First National Bank of Skiatook, C. H. Cleveland, president, Skiatook, Okla., wants prices on bank furniture and fixtures.

Bonding Rolls.—See "Machine Tools."

Billet Heating Furnaces.—See "Puddling Furnaces, etc."

Boilers.—Isaac Turner, Spartanburg, S. C., wants prices on boilers.

Bookbinders' Materials.—Webster Loose Leaf Filing Co., 605 Louisville Trust Co.

Bldg., Louisville, Ky., wants cloth, Russia leather and corduroy for binding; also sheet-metal strips and flat wire.

Bottling Machinery, etc.—P. A. Hann & Co., Creagerstown, R. F. D. from Rocky Bridge, Md., wants bottling machine, labeling, corking and mixing machines for factory to manufacture inks, glue, mucklage, pastes and blueing.

Brick Machinery.—Mineral Oil & Gas Co., T. H. Smith, president, 417 Ouachita Ave., Hot Springs, Ark., wants addresses of manufacturers of press-brick machinery.

Bridge Construction.—St. George Richardson, County Engineer, Memphis, Tenn., will receive bids until 10 A. M. April 15 for construction of steel bridge at Bell's Switch, about six miles from Memphis; will require 60-foot span and 80 feet of approach. County Engineer will also receive bids until 11 A. M. April 15 for construction of 90-foot steel bridge over Jeter Creek on Cuba and Woodstock Rd.; also 160-foot bridge over Big Creek on Lucy and Locke Rd.; plans and



specifications on file in office of County Engineer; certified check, \$100.

**Bridge Construction.**—York county, Thos. W. Boyd, County Supervisor, Yorkville, S. C., will let contract at 11 A. M. April 21 at site for erection of 100-foot steel bridge across Crowder's Creek at Davis' mill, six miles east from Clover, S. C.

**Bridge Construction.**—County Commissioners, Lampasas, Tex., will receive plans and bids April 20 for construction of steel bridge across Lampasas River; main span, 140 feet; two approaches, 45 feet 1 inches and 14 feet 2 inches; dirt fill, 139 feet; cost \$5000 to \$6000; M. M. White, County Judge.

**Brushes.**—M. J. Gonzales, Corral, Chile, wants lowest prices (from manufacturers) on shoe-black brushes; is prepared to place large order.

**Building Materials.**—B. E. and Lloyd H. Grandy, Pickens, S. C., want prices on steel beams, plate and prism glass and metal ceiling.

**Building Materials.**—Isaac Turner, Spartanburg, S. C., wants prices on plate and leaded glass, mantels, grates, plumbing, etc.

**Building Materials.**—J. S. Heatwole Company, Harrisonburg, Va., wants prices on pine framing lumber, cast-iron columns, 1-beams, plate glass and mill work.

**Building Materials.**—Beaumont Marketing Co., Forrest Moore, manager, Beaumont, Tex., wants to correspond with manufacturers of building materials (including roofing material) with view to agency.

**Building Materials.**—F. C. Gilmore, Tallahassee, Fla., wants prices on terra-cotta capitals, pressed brick, wood columns and capitals, exterior and interior finish, roofing, windows and doors.

**Building Materials.**—Louis H. Asbury, Charlotte, N. C., wants prices on mantels, grates, plumbing, tiling, hardwood floors, trimmings, etc.

**Building Materials.**—W. R. White, Hertford, N. C., wants prices on building materials.

**Carpets.**—See "Church Furnishings."

**Cement.**—Mason & Hanger Company, Quicksand, Ky., wants addresses of cement manufacturers adjacent to its territory.

**Cement Molds, etc.**—G. B. Jones, North Main St., Winchester, Ky., wants prices on brick, fancy cement, column and all kinds of molds for cement uses; also wants prices on different brands of cement, such as white cement for fancy work, white sands, cement stains, waterproofing materials, cement coloring, etc.

**Cement.**—See "Flooring."

**Chair Seats.**—M. J. Gonzales, Corral, Chile, wants to correspond with manufacturers of seats for easy chairs (resting chairs).

**Channel Construction.**—Office of Constructing Quartermaster, Fort Moultrie, S. C. Proposals for dredging channel in vicinity of White Stake light, northwest of Sullivan's Island, South Carolina, will be received until 11 A. M. April 27; blank proposals, plans and specifications will be furnished upon application; proposals and other communications should be addressed to Constructing Quartermaster.

**Church Furnishings.**—Noel Memorial Methodist Episcopal Church South, Rev. Francis A. Downs, pastor, 1725 Line Ave., Shreveport, La., wants prices on church fixtures, carpets, etc.

**Cloth.**—See "Bookbinders' Materials."

**Coal-tar Pitch.**—Beaumont Marketing Co., Forrest Moore, manager, Beaumont, Tex., wants to correspond with manufacturers of coal-tar pitch with view to agency.

**Corduroy.**—See "Bookbinders' Materials."

**Cotton Gin.**—Zimmerman & Co., Galveston, Tex., inform Manufacturers Record that Kuehne & Cleve, Bremen, Germany, are considering purchase of cotton roller gin for long-staple cotton.

**Cotton Goods, etc.**—Papooskin Company, 511 Bolton East, Savannah, Ga., wants prices on cotton duck, denim, cretonnes; also satines, silks and mosquito nettings.

**Cotton Machinery.**—P. O. Box 505, Dallas, Tex., wants addresses of makers of machinery for manufacturing absorbent cotton and its products, towels, cotton gauze and cheese-cloth.

**Cottonseed Oil.**—Alberto Kellar, Hilarlo Penasco No. 1, Madrid, Spain, wants addresses of manufacturers or exporters of cottonseed oil.

**Crane.**—Casey-Hedges Company, Chattanooga, Tenn., wants second-hand traveling crane of 5-ton capacity for 43-foot span. State make and condition.

**Creosoting Machinery.**—Mathews Tie Co., Douglas, Ga., wants addresses of manufacturers of creosoting machinery.

**Creosoting Plant.**—Geo. P. Wyly & Co., Louisville, Ga., want information on plant for creosoting railroad cross-ties, piling, etc.; cost of installation, subsequent cost of treating wood, methods, etc.

**Curling and Guttering.**—City of Columbus, Miss., will receive bids until noon May 2 for constructing 6000 linear feet of concrete curb and gutter or granite curb and concrete gutter; plans and specifications on file in Mayor's office; each bid must be accompanied by certified check for 10 per cent. amount of bid; usual rights reserved; E. S. Donnell, Mayor; C. L. Wood, engineer.

**Distributing and Generating System.**—Trustees of William M. Rice Institute will receive bids addressed to Edgar Odell Lovett, president, 1110-13 Scanlan Bldg., Houston, Tex., until noon April 21 for installation of generating and distributing system in powerhouse of William M. Rice Institute; certified check for 10 per cent. amount of bid, payable to the institute; plans, details and specifications at office of Cram, Goodhue & Ferguson, architects, Scanlan Bldg., Houston, or may be had on deposit of \$100 in favor of architects; E. Raphael, secretary.

**Drain-tile Machinery.**—Roderic Clary, Room 57 Third National Bank Bldg., Cumberland, Md., wants addresses of manufacturers of drain-tile machinery.

**Dredging.**—U. S. Engineer Office, Dan C. Kingman, Colonel, Engineers, Charleston, S. C. Sealed proposals for dredging in Win-yah Bay, South Carolina, will be received until noon May 10 and then publicly opened; information on application.

**Electrical Conduits, Wiring, etc.**—Treasury Department, Office of Supervising Architect, James Knox Taylor, Washington, D. C. Sealed proposals will be received in this office until 3 P. M. May 8, and then opened, for installation of conduits, wiring and lighting system in reconstruction of United States postoffice, customs-house and courthouse at Richmond, Va., according to drawings and specifications, copies of which may be had at office of superintendent of construction at Richmond, Va., at discretion of Supervising Architect.

**Electrical Equipment.**—Isaac Turner, Spartanburg, S. C., wants prices on electrical equipment for dwelling.

**Electrical Machinery.**—Granbury Water, Ice, Light & Power Co., Granbury, Tex., will need electrical machinery.

**Engine.**—Walterboro Cotton Oil Co., J. B. Liles, president, Walterboro, S. C., is ready for bids on 14x36 Corliss engine. (See "Oil-mill Machinery.")

**Farm-Implement Manufacturers.**—B. F. Williams, care of Boston Insurance Co., Lehigh, Okla., wants to correspond with manufacturers of farm implements.

**Fire Extinguishers.**—M. J. Gonzales, Corral, Chile, wants information and lowest prices (from manufacturers) on chemical fire extinguishers.

**Fire Extinguisher.**—City of Thorsby, Ala., wants chemical fire extinguisher; wants to correspond with manufacturers. Address P. K. Villadsen.

**Fireproofing.**—Realty Construction Co., Birmingham, Ala., wants bids on fireproofing for \$300,000 14-story office building.

**Fence Gates.**—Lewis E. Murrell, Bayou Goula, La., wants catalogues and prices on patent fence gates.

**Flooring.**—F. L. Bonfoey, Charlotte, N. C., wants prices on cement floor.

**Folding Machine.**—Spartanburg Printing Co., Spartanburg, S. C., wants newspaper and periodical folding machine; about 36x48; would buy second-hand machine if guaranteed.

**Gates.**—See "Automatic Gates." and "Fence Gates."

**Grading.**—Thomas E. Ramsey, County Auditor, San Antonio, Tex., will receive bids until 11 A. M. April 20 for grading Nacogdoches Rd. from Bulverde to Cibolo Rd.; plans and specifications on file in office of County Auditor.

**Grist Mill.**—William Seidel, Brenham, Tex., wants prices on grist mill.

**Hardware.**—Pelican Metal & Roofing Co., 733 Howard Ave., New Orleans, La., wants hardware for fire doors and shutters; such as approved by underwriters' laboratories.

**Heater.**—Tamm's Silica Co., Tamms, Ill., wants second-hand heater; 250 or 300 horsepower (Cochran preferred).

**Heating.**—Trustees of William M. Rice Institute will receive bids addressed to Edgar Odell Lovett, president, 1110-13 Scanlan Bldg., Houston, Tex., until noon April 21 for heating administration building, mechanical laboratory and powerhouse at William M. Rice Institute; certified check for 10 per cent.

amount of bid, payable to the institute; plans, specifications, etc., at office of Cram, Goodhue & Ferguson, architects, Scanlan Bldg., Houston, or may be obtained on deposit of \$50 in favor of architects; E. Raphael, secretary.

**Heating Plant.**—Polk County Commissioners, J. H. Williamson, chairman, County Court, Lock Box 163, Benton, Tenn., wants prices on steam-heating plant for county jail.

**Heating Plant.**—Isaac Turner, Spartanburg, S. C., wants prices on vacuum heating plant.

**Heating Plant.**—Noel Memorial Methodist Episcopal Church South, Rev. Francis A. Downs, pastor, 1725 Line Ave., Shreveport, La., wants prices on heating plant.

**Heating and Ventilating Plant.**—Treasury Department, Office of Supervising Architect, James Knox Taylor, Washington, D. C. Sealed proposals received until 3 P. M. May 16, and then opened, for installation of steam heating and ventilating apparatus, etc., for reconstruction of United States postoffice, courthouse and customs-house at Richmond, Va., according to drawings and specifications, copies of which may be had at this office or at office of superintendent of construction at Richmond, at discretion of architect.

**Holsts.**—Albert Garren, 1317 Butler St., Easton, Pa., wants 10x12 double-drum skeleton holsts; second-hand.

**Hydrochloric Acid.**—Harry E. Gilbert, Lexington and Charles Sts., Baltimore, Md., wants prices and information on hydrochloric acid.

**Ice Plant.**—J. T. Jennings, Altavista, Va., wants information and prices on materials and machinery for ice plant.

**Ice Machinery.**—Granbury Water, Ice, Light & Power Co., Granbury, Tex., will need ice machinery.

**Ironworking Machinery.**—John G. Duncan Company, Box 255, Knoxville, Tenn., wants dealers' prices on second-hand 8 to 10-foot 22 to 26-inch-swing iron lathe, small iron planer and 20-inch drill press; immediate shipment.

**Jail Equipment.**—Polk County Commissioners, J. H. Williamson, chairman, County Court, Lock Box 163, Benton, Tenn., wants prices on jail fixtures, cells, etc.

**Laundry Machinery.**—Chamber of Commerce, Camden, S. C., wants bids on laundry machinery.

**Leather.**—See "Bookbinders' Materials."

**Leathers, etc.**—Finocchiaro & Cambarel, Via Ogninella N. 12, Catania, Italy, wants to correspond with dealers in leathers and skins (for shoe findings) with view to agency.

**Leathers.**—Papooskin Company, 511 Bolton East, Savannah, Ga., wants prices on imitation or upholstered leathers.

**Machine Tools.**—Casey-Hedges Company, Chattanooga, Tenn., wants prices on second-hand hydraulic riveter, eight-foot stake, from 100 to 125 tons; also second-hand 12-inch boiler plate bending rolls to roll one-inch plate 12 feet wide to 42-inch circle. State name of maker and condition of machines.

**Machine Tools.**—Isthmian Canal Commission, Purchasing Department, Washington, D. C. Sealed proposals received until April 25, under Circular 627-B, for furnishing chain, milling cutters, spiral-end mills, machine bits, reamers and slitting and band saws; F. C. Boggs, Captain, General Purchasing Officer.

**Machine Tools.**—See "Nut and Bolt Machines" and "Puddling Furnaces, etc."

**Mining Machinery.**—See "Pulverizer Machinery."

**Metal Strips.**—See "Bookbinders' Materials."

**Motor Trucks.**—Geo. W. L. Weaver, 1415 Parkerson Pl., New Orleans, La., wants to correspond with manufacturers of motor trucks with view to agency.

**Nut and Bolt Machines, etc.**—H. W. Coleman, 94 Brooke Ave., Norfolk, Va., wants addresses of manufacturers of nut and bolt machines and spike machines.

**Oil-mill Machinery.**—Walterboro Cotton Oil Co., J. B. Liles, president, Walterboro, S. C., is ready to receive bids on one hydraulic press equipment, complete, with 14x36 Corliss engine.

**Optical Apparatus.**—M. J. Gonzales, Corral, Chile, wants optical apparatus for amusement and instruction; wishes to correspond with manufacturers.

**Paving.**—H. A. Skeggs, Mayor, and City Council, Decatur, Ala., will receive bids until 8 P. M. April 18 for furnishing material and constructing certain cement sidewalks, brick crosswalks and cement curbs provided for under improvement ordinance

No. 31, Series C; plans and profiles on file in office of City Engineer; E. W. Collier, clerk.

**Paving, etc.**—Bids will be received at office of Bascom Sykes, engineer, 510 Middle St., Portsmouth, Va., addressed to W. E. Henry, chairman of Local Board of Improvements of Sixth Ward, until 8 P. M. April 19 for grading and removing earth from following streets: Pearl St., between County St. and South-street Rd.; County St., between Chestnut and Rose Sts., and Glasgow St. from Scotts Creek bridge to Belt Line Railroad; for furnishing and paving with vitrified brick, on sand foundation, roadway of County St. from Chestnut to Blount St., and for furnishing and setting five-inch granite curbing on County St., between Chestnut and Rose Sts., and of Glasgow St. from Scotts Creek bridge to Belt Line Railroad; for furnishing materials and labor in paving with bituminous macadam roadways on County St., between Blount and Rose Sts., and on Glasgow St. from Scotts Creek bridge to Belt Line Railroad; specifications and other information can be obtained of W. E. Henry, chairman, Seaboard Air Line Railway shops, Portsmouth; each bid to be accompanied by certified check for 5 per cent. of bid, payable to H. L. Hudgins, City Treasurer; Bascom Sykes, engineer.

**Paving.**—City of Mount Sterling, Ky., will receive bids at 7.30 P. M. April 20 for paving 12,000 yards of streets with vitrified blocks and concrete base; certified check for \$1000 must accompany each bid. Address H. M. Ringo, City Clerk.

**Paving.**—L. H. Baker, Secretary-Treasurer, Shreveport, La., will receive bids until 10 A. M. April 11 for construction of concrete curbing and sidewalks as per plans and specifications on file in office of City Engineer; bids to be made on blanks furnished by City Engineer; cashier's check for \$50 to accompany each bid.

**Paving.**—City Council, New Decatur, Ala., will receive bids until 8 P. M. April 19 for construction of certain cement sidewalks, provided for under improvement ordinances Nos. 222 and 223; separate bids to be made under each ordinance; plans, profiles and specifications on file in office of City Clerk and City Engineer; John Patterson, Mayor; Henry Hartung, Clerk.

**Paving.**—Bob Parman, City Clerk, Oklahoma City, Okla., will receive bids until 10 A. M. April 18 for grading, paving with asphaltic concrete, etc., Ave. E, Ave. F, Ave. D, Hudson Ave., Ave. A, etc.; plans and specifications on file in office of City Clerk; certified check, 3 per cent. of bid.

**Petroleum.**—See "Vaseline."

**Pineapple-shredding Machinery, etc.**—John W. Davis, St. Lucie, Fla., wants addresses of manufacturers of machines for paring and shredding pineapples.

**Piping.**—Bids will be received at office of Ennis M. Douglas, City Clerk, Memphis, Tenn., until noon April 11, 1911, for furnishing labor, tools, hauling for and doing following described work: Lewis Ave., from a point 400 feet south of Chelsea Ave., along Cypress Creek to Wolf River and laterals; 7800 feet 15-inch pipe; 2000 feet 10-inch pipe; 3500 feet 8-inch pipe; 2000 feet 6-inch pipe; 31 manholes; specifications and profiles may be seen at office of City Engineer; certified check, \$250; E. H. Crump, Mayor.

**Plumbing.**—See "Building Materials."

**Photographic Supplies.**—M. J. Gonzales, Corral, Chile, wants "something in line of practical photography for postal cards."

**Pottery Machinery.**—Mineral Oil & Gas Co., T. H. Smith, president, 417 Ouachita Ave., Hot Springs, Ark., wants addresses of manufacturers of pottery and table ware machinery.

**Pneumatic Drill.**—Isthmian Canal Commission, Purchasing Department, Washington, D. C. File C. Z. 5138-A. Sealed proposals received until April 11 for furnishing pneumatic post drill; F. C. Boggs, Captain, General Purchasing Officer.

**Pulverizer Machinery.**—D. C. Gillett, care of Gulf Fertilizer Co., American National Bank Bldg., Tampa, Fla., wants information and prices on dry pulverizer and other machinery for limestone mining.

**Rails.**—Richlands Brick Corporation, Richlands, Va., wants 4000 feet 16-pound steel rails; new or relaying.

**Riveter.**—See "Machine Tools."

**Pipe.**—Albert Garren, 1317 Butler St., Easton, Pa., wants four and six-inch wrought pipe; second-hand.

**Puddling Furnaces, etc.**—H. W. Coleman, 94 Brooke Ave., Norfolk, Va., wants addresses of manufacturers of puddling furnaces; also billet heating furnaces.

**Rails.**—Tampa & Gulf Coast Railway, C. H. Lutz, general manager, Odessa, Fla.,

wants four miles relaying steel rails with angle plates; weight 50 pounds per yard.

**Road Construction.**—Sealed bids will be received by Board of County Commissioners of Duval county at their office, Courthouse, Jacksonville, Fla., until 10 A. M. May 3, for construction of about 13,000 square yards asphalt macadam resurfacing from city limits of South Jacksonville, on Atlantic Blvd., 1½ miles, more or less; specifications and other data on application to Gail L. Barnard, County Engineer, Room 9 Courthouse, Jacksonville; usual rights reserved; bids to be marked "Resurfacing Atlantic Boulevard" and addressed to C. W. Ellis, chairman, Room 9 Courthouse, Jacksonville, Fla.

**Road Construction.**—Bids will be received at Norfolk County Clerk's office, Portsmouth, Va., until noon April 17 for construction of macadam road from bridge at Lafayette Residence Park to road formerly known as Cottage Toll Bridge Rd., according to plans and specifications by W. G. Brown, engineer, which may be seen at clerk's office; Alvah H. Martin, chairman Permanent Road Improvement Commission, Portsmouth; P. St. J. Wilson, State Highway Commissioner, Richmond, Va.

**Road Rollers.**—F. & N., care of Manufacturers Record, Baltimore, Md., wants 10-ton Buffalo Pitts road roller; state lowest price.

**Road Roller.**—Southern Machinery & Equipment Co., 4 National Exchange Bank Bldg., Lynchburg, Va., wants 10-ton steam road roller. State price, name, general description and where can be inspected.

**Road Work.**—Office of Commissioners of the District of Columbia, Washington, D. C. Sealed proposals received until 2 P. M. April 22 for making repairs to asphalt pavements for period ending June 30, 1913. Forms of proposals, specifications and necessary information may be obtained from chief clerk, Engineer Department, Room 427 District Building, Washington, D. C.; Cuno H. Rudolph, John A. Johnston, Edward M. Markham (acting), Commissioners D. C.

**Roofing.**—See "Building Materials."

**Rope.**—Papeoskin Company, 511 Bolton East, Savannah, Ga., wants prices on cotton rope.

**Safe, etc.**—First National Bank of Skiatook, C. H. Cleveland, president, Skiatook, Okla., wants prices on burglar-proof safe and nest of safety boxes.

**Salt Cake.**—Harry E. Gilbert, Lexington and Charles Sts., Baltimore, Md.; wants prices and information on salt cake used in manufacturing glass.

**Scales.**—W. V. Moore, West End, Va., wants automatic grain scales of about 700 bushels per hour capacity.

**Scale.**—Isthmian Canal Commission, Purchasing Department, Washington, D. C., File C. Z. 5134-A. Sealed proposals will be received until April 12, 1911, for furnishing one railroad depot scale; F. C. Boggs, Captain, Corps of Engineers, U. S. Army, General Purchasing Officer.

**Sewing Machines.**—Papeoskin Company, 511 Bolton East, Savannah, Ga., wants prices on sewing machines with motors.

**Screw Punch.**—Wilmington Iron Works, Wilmington, N. C., wants screw punch for punching holes in flanges of eye beams.

**Seating.**—Noel Memorial Methodist Episcopal Church South, Rev. Francis A. Downs, pastor, 1725 Line Ave., Shreveport, La., wants prices on seating.

**Sewer Construction.**—See "Water-works, etc."

**Sewer Construction.**—Bob Parman, City Clerk, Oklahoma City, Okla., will receive bids until 10 A. M. April 17, and considered by Mayor and City Council at 10 A. M. April 18, for construction of main storm sewer on Walker Ave. from Ave. E to Poplar St., and on Ave. E from Robinson Ave. to Lightning Creek; plans and specifications on file in office of City Clerk; certified check, 3 per cent. amount of bid.

**Sewer Construction.**—City Council, New Decatur, Ala., will receive bids until 8 P. M. April 19 for furnishing material and constructing certain storm sewers provided for under improvement ordinances Nos. 216 and 217; also until same date for furnishing material and constructing certain sanitary sewer laterals provided for under improvement ordinance No. 221; plans, profiles and specifications on file in offices of City Clerk and City Engineer; John Patterson, Mayor; Henry Hartung, Clerk.

**Sewer Construction.**—Bids will be received at office of City Treasurer, Spartanburg, S. C., until 4 P. M. April 24 for construction of four lines of sewers, 300, 1700, 100 and 50 feet long, respectively; pipes to be eight inches in diameter; bids to be submitted on whole or part of above work; profiles on file in

office of City Treasurer; J. H. Shores, Superintendent of Streets.

**Sewer Construction.**—Board of Commissioners, Huntington, W. Va., will receive bids until 1 P. M. May 8 for construction of 12-inch lateral sewers in various alleys; plans and profiles on file in office of A. B. Maupin, City Engineer; certified check, \$500.

**Sewer Construction.**—Office Commissioners, District of Columbia, Washington. Proposals will be received until 2 P. M. April 22 for making repairs to asphalt pavements for period ending June 30, 1913. Forms of proposals, specifications and necessary information may be obtained from Chief Clerk, Engineer Department, Room 427 District Bldg., Washington, D. C.; Cuno H. Rudolph, John A. Johnston, Edward M. Markham, acting Commissioners, D. C.

**Shredding Machinery.**—See "Pineapple shredding Machinery, etc."

**Ship Augers.**—Eureka Stumping Machine Co., H. L. Harrell, president, Moultrie, Ga., wants prices on ship augers, 36 inches long, 30-inch barrel and 9-16 inch shank.

**Shoes.**—Finocchio & Cambarel, Via Ogninella N. 12, Catania, Italy, wants to correspond with dealers in men's and women's shoes with view to agency.

**Silks.**—See "Cotton Goods, etc."

**Slips Repairs.**—Sealed proposals indorsed "Proposals for Repairs to Slips for Torpedo Vessels" received at Bureau of Yards and Docks, Navy Department, Washington, D. C., until 11 A. M. May 6, and then and there publicly opened, for repairs to slips for torpedo vessels at United States Navy-yard, Norfolk; plans and specifications can be obtained on application to bureau or to commandant of Navy-yard named; R. C. Hollday, chief of bureau.

**Soap Machinery.**—Booster Soap Co., McKinney, Tex., wants prices on soap machinery; daily capacity 100 cases.

**Spike Machines.**—See "Nut and Bolt Machines."

**Steel.**—Realty Construction Co., Birmingham, Ala., wants bids on steel for \$200,000 14-story office building.

**Steel Beams.**—Richlands Brick Corporation, Richlands, Va., wants 1000 feet 4-inch 7½-pound steel I beams.

**Stokers.**—Sealed proposals will be received until 3 P. M. April 20 for furnishing and installing on four boilers at city hall approved mechanical stokers or similar device for prevention of smoke, etc. A bond equal to 50 per cent. of amount of contract price required of successful bidder; W. P. Beck, Building Inspector.

**Tank.**—Tamms Silica Co., Tamms, Ill., wants price on 4000-gallon water tank; wood or metal; new or second-hand.

**Telegraph Poles, etc.**—Office of Chief Signal Officer, Capt. A. S. Cowan, disbursing officer, War Department, Washington, D. C., will receive bids until April 17 for furnishing Signal Corps with 1500 poles, lance, for field telegraph lines, specifications 376-a, 96-b, drawing 415c-1 and 106; also 150 tips for lance poles, specifications 376-a, drawing 415c-1.

**Typewriters.**—Finocchio & Cambarel, Via Ogninella N. 12, Catania, Italy, wants to correspond with dealers in typewriters with view to agency.

**Vacuum Cleaners.**—S. S. Rozier, 2208 Gadsden St., Columbia, S. C., wants addresses of manufacturers of suction dust collectors or sweepers; machine operated by attachment to ordinary electric-light drop preferred.

**Vaseline.**—Alberto Keller, Hilario Pannoso I, Madrid, Spain, wants to correspond with manufacturers or exporters of non-refined vaseline for use of druggists, chemists, perfumers, etc.

**Vault Doors.**—First National Bank of Skiatook, C. H. Cleveland, president, Skiatook, Okla., wants prices on vault doors.

**Waterproof Paper.**—Thos. Bacon, Box 483, Wilmington, N. C., wants to correspond with manufacturers of medium heavy waterproof paper.

**Water-works.**—Granbury Water, Ice, Light & Power Co., Granbury, Tex., will need equipment.

**Water-works, etc.**—John H. Tomme, City Clerk, Mangum, Okla., will receive bids until 8 P. M. April 12 for extension and re-equipping of water-works and sewerage systems; plans and specifications on file in office of City Clerk; certified check, \$1000.

**Water-works Basin.**—Bob Parman, City Clerk, Oklahoma City, Okla., will receive bids until 5 P. M. April 17, to be considered by Mayor and City Council, City Hall, at 10 A. M. April 18, for construction of reinforced concrete sedimentation basin at water-works pumping station, according to plans and

specifications on file in office of Water Department, V. G. Shinkle, superintendent, and also of City Clerk; certified check, 3 per cent. of bid.

**Water System.**—Isaac Turner, Spartanburg, S. C., wants prices on hot and cold water system for \$11,000 dwelling.

**Water-works.**—Sealed proposals will be received by W. B. Jones, City Clerk of Ada, Okla., at his office in City Hall until 8 o'clock P. M. April 17, 1911, for furnishing of all tools, labor, material and appliances necessary to unload, haul and distribute pipe, excavate and back-fill trenches, and lay, complete and ready for use, the following approximate quantities of pipe: Pipe outside of city limits—65,000 linear feet 12-inch pipe, either of cast iron or steel; bids will be received for laying each kind of pipe; 3000 linear feet of steel pipe, 30 inches in diameter and 3-16 of one inch thick; plans, specifications, form of contract and proposal and full information may be obtained from consulting engineers, Goodwin & Harper, 929 Scarritt Bldg., Kansas City, Mo.; each proposal must be accompanied by certified check of not less than 5 per cent. of amount bid, made payable to City Treasurer; city reserves usual rights. (Bids recently noted.)

**Well-drilling Machinery.**—Mineral Oil & Gas Co., T. H. Smith, president, 417 Ouachita Ave., Hot Springs, Ark., wants addresses of manufacturers of diamond core drill and deep oil-well machinery.

**Wheat.**—Finocchio & Cambarel, Via Ogninella N. 12, Catania, Italy, wants to correspond with dealers in hard wheat with view to agency.

**Wire.**—See "Bookbinders' Materials."

**Wire.**—Papeoskin Company, Savannah, Ga., wants prices on smooth and brass wire.

**Wire Cable.**—Albert Garren, 1317 Butler St., Easton, Pa., wants lot of 2 to 2½-inch diameter wire cable; second-hand.

**Wire-weaving Machinery.**—E. B. Selden, 1108 Walker, Houston, Tex., wants addresses of manufacturers of machine for weaving wooden pickets in wire for fencing.

**Wire and Cable.**—Office of Chief Signal

Officer, Capt. A. S. Cowan, disbursing officer, War Department, Washington, D. C., will receive bids until 10:30 A. M. April 21 for furnishing Signal Corps with 500 feet wire, brass No. 11 B and C; 600 feet wire, high tension, specifications 416-B and 403-A; 1000 feet wire, low tension, specifications 416-B and 403-A; also 1000 feet cable, type 644, in accordance with specifications 432-A, 96-B, 430-A and drg. 106 in one length; new reel will be required; reel will remain property of contractor and will be returned when empty; state value.

**Wire Rope, Steel Rails, etc.**—Sealed proposals will be received at office of General Purchasing Officer, Isthmian Canal Commission, Washington, D. C., until 10:30 A. M. May 10, and then opened, for furnishing steel rails, frogs, switches, switchstands, tie-plates, angle bars, iron, galvanized roofing, nuts, nut locks, track bolts and spikes, pipe, wire rope, wire, babbitt metal, pig tin, slab zinc, pig lead, ingot copper, pig iron, etc.; blanks and general information relating to this circular (No. 628) may be obtained at above office or offices of assistant purchasing agents, 24 State St., New York; 55 National Realty Bldg., New Orleans; 1086 North Point St., San Francisco; also from U. S. Engineer Office in Seattle, Los Angeles, Baltimore, Philadelphia, Pittsburgh, Boston, Buffalo, Cleveland, Cincinnati, St. Paul, Detroit, Milwaukee, Chicago, St. Louis, Chattanooga, Louisville, Mobile and Galveston; Commercial Club, Kansas City; Chamber of Commerce, Quincy, Ill., and Chamber of Commerce and Board of Trade, Tacoma; F. C. Boggs, Captain, Corps of Engineers, U. S. A., General Purchasing Officer.

**Woodworking Machinery.**—Ivey Manufacturing Co., Hickory, N. C., opens bids about April 15 for machinery to manufacture school desks; has steam plant.

**Wood-pulp Machinery.**—A. H. Shannon, Mississippi Agricultural and Mechanical College, Agricultural College, Miss., wants addresses of manufacturers of pulping machinery to handle "fat" pine; wants machine to cut wood into thin shavings.

## INDUSTRIAL NEWS OF INTEREST

### Selden-Breck Contract in Chicago.

The Selden-Breck Construction Co., Fullerton Bldg., St. Louis, will erect the six-story building for the National Candy Co. of Chicago at a cost of \$150,000.

### Louisiana Land for Reclamation.

Contractors want 5000 to 100,000 acres of Louisiana prairie land to reclaim at their expense with their dredges on half ownership of property. Owners are invited to address "Drainage Contractors," Box 592, Itta Bena, Miss.

### Change of Office Locations.

Announcement is made that the Chicago office of the Atlantic Equipment Co. has been moved from Railway Exchange Bldg. to 907-912 McCormick Bldg., Michigan Blvd. and Van Buren St., and the same change has been made by the American Locomotive Co.

### Wants to Buy Marble Deposits.

Marble deposits are wanted by John H. Camp of Paris, Tex. He specifies a large deposit of porous tough marble with fine grain for high-grade filters and another of light soft buff tough marble. Immediate correspondence is invited.

### Fort Worth Art Glass Co.

Among the new manufacturing enterprises inaugurated at Fort Worth is that of the Fort Worth Art Glass Co., of which C. O. Newman is president. He is a practical art-glass specialist from New York city, and the company will manufacture all classes of high-grade leaded glass for church, residence and library use.

### The Globe Electric Co.

The Globe Electric Co., Charlotte, N. C., electrical contractor for and manufacturer of electric fixtures, etc., reports an increasing business. It has recently wired and furnished fixtures for the J. Arthur Henderson Apartments, wired the large residence of J. L. Spencer and wired the two stores of W. C. & W. F. Dowd, all of Charlotte.

### Art Glass and Mirror Works.

The Southwestern Art Glass and Mirror Works, 207-A S. Main St., Fort Worth, has commenced business under the active management of Leopold Matula, formerly with the Malloy Art Glass & Mirror Works of Dallas. The company manufactures all kinds of art glass in lead, zinc, copper and brass, and also carries on prism and plate glass work.

### Acme Press Brick Co.

R. S. Root of Chicago is now manager for the Acme Press Brick Co., Fort Worth, Tex. This company was organized in 1891 with a capital of \$52,000, and its trade now extends over North Texas and Oklahoma. It manufactures a special face brick of red color, and uses shale clay, which requires a high degree of heat, and produces what is known as the "mill sap brick."

### Concrete Pipe for all Purposes.

The Reinforced Concrete Culvert Pipe Co., Jacksonville, has contract to furnish all the reinforced concrete pipe for storm sewers on Hollowman St. and Highway Ave., Jacksonville. F. W. Long & Co. of Jacksonville are the contractors and R. N. Ellis is city superintendent. The company makes concrete pipe for all purposes from 12 inches to 72 inches diameter.

### A New Production Record.

The Detroit Seamless Steel Tubes Co. of Detroit reports a new record in tonnage manufactured for March of 24 per cent. larger than any previous month in its history. A large percentage of the production of this company is used by the railroads for locomotive flues, and the flues supplied for March, if placed end to end, would represent a tube 175 miles long.

### For Cotton-Mill Supplies.

The Charlotte (N. C.) Manufacturing Co. has bought the machinery and equipment of the Southern Card Clothing & Reed Co., and will continue the plant. The new company has been incorporated by F. W. Glover, A. J. Crampton and P. L. McMahon. It will manufacture card clothing, reeds, cylinders, dofers, top flats, strippers, burnishers, hand cards and slasher combs.

### Texas Heating & Ventilating Co.

The Texas Heating & Ventilating Co., Fort Worth, has established a branch office in Oklahoma City. This company installs heating and ventilating outfits and deals in registers, furnace pipe, fittings, asbestos coverings, etc., and acts as agent for the Lenox Furnace Co. of Marshalltown, Ia. Several contracts for installations in Oklahoma have recently been closed by the company.

### 1911 Season Fan Contracts.

The H. C. Roberts Electric Supply Co. of Philadelphia, through its Southern representative, W. H. Green of Charlotte, has closed fan contracts for 1911 with the Dur-



ham (N. C.) Traction Co. and the Central Electric Co. of Greensboro. Emerson and Trojan fans will be supplied. These Roberts contracts are representative of many that have been closed in Southern territory.

#### A. B. Sanders & Co.

A. B. Sanders, formerly manager of the electrical department of John B. Watson, Philadelphia, announces he has established A. B. Sanders & Co., Witherspoon Bldg., Philadelphia. This company will deal in electric railway equipment, steam and electrical machinery and contractors' equipments, with A. B. Sanders as manager, he having had many years' experience in this line.

#### Foreign Car-Wheel Shipments.

Recently the Decatur Car Wheel Co., Savannah, shipped on a steamer, chartered for the purpose, from Savannah to Genoa, Italy, a consignment of 6000 car wheels. The securing of this order follows the active steps taken by this company to broaden the scope of its business, and only recently a large shipment of car wheels was made from the Savannah plant to Yucatan. It is the purpose of the company to increase its sales in South America, Mexico and Cuba, where shipments have already been made to some extent.

#### Representing Brick Manufacturers.

R. D. Harry, formerly member of the Harry Brick Co. of Dallas, has sold his interest in that company and established his office in the Builders' Exchange Bldg., Fort Worth, Tex., where he represents the Elgin Butler Brick & Tile Co. of Austin, the Athens Press Brick Co. of Athens, Tex., the Kansas Buff Brick & Manufacturing Co. of Bufile, Kans., and the Leon Keeble Brick Co. of Fort Worth.

#### McKinney Traction Cultivator Co.

In order to expand the development of its traction cultivators, the McKinney Traction Cultivator Co., formerly of Gainesville, Ga., has removed its offices to St. Louis, 402 LaSalle Building, and is establishing a manufacturing plant. This company expects to be able to meet a demand for traction cultivators in the South and Southwest, and will introduce its patent gasoline traction machines for this purpose as soon as practicable.

#### Heating and Ventilating Contracts.

The Dunham Engineering Co. of Marshalltown, Ia., and Fort Worth, Tex., has closed contracts for heating and ventilating apparatus in the Agricultural and Mechanical College at Jonesboro, Ark., at a cost of \$15,000; Kinkaid & Lawrence buildings at Oklahoma City at \$14,000; State Penitentiary at McAlester, Okla., at \$10,000. This company is a branch of the National Vacuum Heating Co. of Marshalltown.

#### Buffalo Forge Co. Contracts.

Among recent orders received by the Buffalo (N. Y.) Forge Co. for equipment of Buffalo down-draft forges with the necessary fans and motors are those from Anheuser-Busch Brewing Association, St. Louis; Weyer Wagon Works, Wausau, Wis.; Bradley Polytechnic Institute, Peoria, Ill.; Shaw University, Raleigh, N. C.; Palmer & Singer Manufacturing Co., New York; Fiat Automobile Co., Poughkeepsie.

#### Moore Construction Co.

The Moore Construction Co., general contractor, Charleston, W. Va., has opened a branch office in Norfolk under the management of Junius H. Moore, and the business address is 34 Virginia Bank & Trust Bldg. Mr. Moore states he will be pleased to hear from supply dealers, etc. The officers at Charleston are Wm. E. Moore, president; R. B. Cassidy, vice-president; E. L. Harris, secretary; John D. Moore, treasurer.

#### Expansion in a Fort Worth Plant.

The Southwestern Mechanical Co. of Fort Worth, Tex., has adopted electric power in place of steam and has extended its trade over North Texas and Oklahoma. It has increased its force since 1903 from 40 employees to over 350, and now manufactures heavy forgings, well-drilling tools, smokestacks, galvanized and sheet iron work, boiler work, structural steel and building materials.

#### Government Orders for Foos Engines.

Two Foos engines for use at one of the dams in the river-improvement work near Wheeling have been shipped to the order of the U. S. Government by the Foos Gas Engine Co., Springfield, O. These engines are designed along the lines of the heavy-duty vertical-cylinder type Foos engine, consisting of three cylinders, each of 100-horsepower capacity, and will be installed at dam

No. 8, this being only a part of the total order received.

#### New Contracting Company.

C. F. Hickman and H. T. Benner of Greensboro, N. C., have formed the Hickman-Benner Company, heating and ventilating engineer and contractor. This firm, appreciating the growing importance of ventilating and heating facilities and the knowledge of the need of such facilities by the general public, expects to do a large and satisfactory business. It will be pleased to receive catalogues and prices from firms dealing in supplies in these lines.

#### Texas Fire-Brick Co.

Announcement is made by the Texas Fire-Brick Co. that its general sales office has been removed from Corsicana to 215 Praetorian Bldg., Dallas, Tex. This provides commodious quarters in a large city, and the company is in a position to handle the face-brick and fire-brick business to advantage. This company manufactures high-grade gray, buff, manganese face-brick, mantel brick, fire-brick and fire clay, with plant at Lasher, near Elgin, Tex.

#### Notable Increase in Orders.

The Ohio Elevator & Machine Co. of Columbus reports that, following the success of last year, the company has met with almost phenomenal conditions in its orders for the present season. Thus far this year orders have been booked to an extent of almost two-thirds of all last year. Included in these is a contract for elevators in the Rialto Building at Kansas City, where the company furnished six tandem traction high-speed passenger elevators.

#### Additional Southern Representatives.

The American Machine Co. of Louisville, manufacturing freight and passenger elevators, has arranged to be represented at Dallas and vicinity by J. Peyton Hunter, 2 Terminal Building, Dallas, and at St. Louis by the American Electric Machine & Elevator Co. This well-known Louisville company has contract for installing two of its electric elevators in the Commercial Building at Monterey, Mexico. It also has contracts for elevators in various sections of the United States.

#### Important Brick Contract.

Information has been received from the Richlands Brick Corporation, Norton, Va., that it has been awarded the contract to furnish 600,000 bricks to be used in the Government building at Big Stone Gap, Va. This company manufactures shale building bricks, press bricks, rough texture face bricks and drain tile at Richlands, Va., with general offices at Norton; capacity, 60,000 per day. It had an output last year of 50,000,000 bricks, and will probably more than double that amount this year.

#### Individual Motor Drive.

A very interesting address was recently delivered before the graduating class at Clemson College, Clemson, S. C., by John W. Fox of the Charlotte office of the Westinghouse Electric & Manufacturing Co. of Pittsburgh, on the subdivision of power in textile machinery. Special reference was made to the economical and advantageous use of individual motor drives, the four-frame drives and group drives in general. The address was illustrated with graphic recording charts showing the power consumption of the various machines.

#### "American Vanadium Facts."

The Vanadium Sales Co. of America, Frick Bldg., Pittsburgh, has published its first issue of "American Vanadium Facts," which is a periodical in the interests of "Amerivan" ferro-vanadium. Since vanadium has become more plentiful and can be mined in sufficient quantities to make it an article of increasing commercial use, its value as an element in the strengthening of steel without increasing hardness or brittleness has made it of the highest importance, and this publication is intended to increase and spread the knowledge of its uses and value.

#### Thor Compressed Air Tools.

The Independent Pneumatic Tool Co. has issued circular "N," showing its latest improved air tools, including piston air drill up to 2½ inches diameter; reversible wood-boring machines; chipping, caulking and flue heading hammer; rivetting hammer; stay bolt drivers; yoke rivetter; grinding machine; seven-ply plain or wire-wound air hose; hose and pipe couplers. The works of this company are at Aurora, Ill.; main office, Thor Bldg., Chicago; other offices in Farmers' Bank Bldg., Pittsburgh; 170 Broadway, New York, and 61 Fremont St., San Francisco.

#### Information for Inventors.

It is well known that there are many instances where the patenting of ideas or inventions has resulted in the originators becoming wealthy. The securing of patents has become a specialty with many individuals and firms, and they are usually possessed of a fund of information valuable to people who think of applying for patents. Among such firms may be named Chandice & Chandice, 236 F St. N. W., Washington, D. C. This firm has for years been prominent in the patent world and is continuing to offer its services to inventors. It invites inquiries for its publications entitled "How to Obtain a Patent" and "What to Invent."

#### Large Well-Drilling Contracts.

The Hughes Specialty Well Drilling Co., Charleston, S. C., has recently completed the following contracts: Well 8 inches by 375 feet for Savannah Bank & Trust Co.; well 8 inches by 400 feet for American Agricultural Chemical Co., Savannah; well 10 inches by 420 feet at Wrightsville, Ga., and others as large as 10 inches by 500 feet deep for various parties in South Carolina and Georgia. Work is being started on other wells, including one for the Marietta Fertilizer Works, Atlanta, and one 10 inches by 6 inches by 600 feet for Atlantic Coast Line Railroad at Jessup, Ga.

#### Gas-Driven Locomotives.

The Milwaukee Locomotive Manufacturing Co. of Milwaukee has published bulletin No. 101, which deals with gasoline-driven locomotives for mines, tunnels, contractors' service, lumber yards, industrial plants, railways, brick and cement works, etc. These locomotives represent the logical development of gas-motor practice in its application to equipments built for haulage purposes. They are compactly built, and are used in underground or surface work. The bulletin describes and illustrates the different sizes of this locomotive with views of its practical use in operation.

#### The Largest Storage Battery.

A contract has just been made by the Consolidated Gas, Electric Light & Power Co. of Baltimore with the Electric Storage Battery Co., Allegheny Ave. and 19th St., Philadelphia, for the installation of what is said to be the largest storage battery in the world. This battery will consist of 152 cells of the "Exide" type, each cell containing 133 plates. The total weight, equipped with plates and electrolyte, ready for service, will be about 1,079,200 pounds. The battery fully charged will supply sufficient electricity to light 120,000 25-watt Tungsten lamps for one hour, or 240,000 such lamps for 20 minutes, having an output of 4000 horse-power. These huge emergency or "stand-by" storage batteries are used by the large electric companies to provide for unusual demands, caused sometimes by a temporary accident to generating machinery, or by sudden darkness preceding a thunderstorm, or, as recently experienced in New York city, by a heavy snow fall, which within 10 minutes increased the demand for electricity on the New York Edison Co.'s system from 100,000 horse power to 160,000 horse-power. The Electric Storage Battery Co. has installed batteries for the New York Edison Co. and electric-lighting companies in Chicago, Minneapolis, Brooklyn, Boston and Spokane.

#### TRADE LITERATURE.

##### Rapp Rolled Steel Windows.

The United States Metal Products Co., 203 W. 40th St., New York, devotes its catalogue No. 101 to Rapp rolled steel windows for industrial buildings. The various forms of windows illustrated are made in standard sizes, but the plant is equipped to handle special sizes when requested, and covers all needs for windows for factories, foundries, power plants, warehouses, industrial buildings and fireproof structures of all kinds. To illustrate the strength of the steel sash a section is shown supporting an automobile and 11 men between the limits of its side supports. This catalogue is of value in preparing window specifications, as it contains nine pages of over-all measurements of two, three and four units, so that the necessary units to fill a given space may be determined.

##### Charles M. Stieff Pianos.

Among the important established enterprises of Baltimore is the one which since 1842 has produced the well-known Stieff piano. The company bears the name of its founder, Chas. M. Stieff, and his descendants

have continued to carry on the work so ably founded by him. This policy of continuing the development of the highest grade of pianos by the sons and grandsons of the founder is applied also to the employees, and in many cases the work is in that way carried through by the skillful hands of trained men who have inherited the ability of their ancestors in the same line. Recent catalogues of the Stieff piano describe its development, with illustrations of the various styles made, also the Stieff piano player. It is pointed out that the piano player is not simply a mechanical music box, but that musical ability applied to it improves the results, and the "player" saves the great amount of physical training and work necessary ordinarily to attain technique. The Stieff piano player makes it possible for every home to have the best of music and at the same time gives opportunity for superior musicians to play the piano in an artistic manner without physical exertion. The Chas. M. Stieff piano warehouses and offices are at No. 9 N. Liberty St., with salesrooms in many important cities.

#### Caterpillar Tractors.

The Holt Manufacturing Co., Stockton, Cal., has established a plant at Peoria, Ill., to manufacture the Holt "caterpillar" gasoline traction engine, for the purpose of introducing it into the territory east of the Rocky Mountains. This company has long been known as a manufacturer of traction engines, combined harvesters and other agricultural implements on the Pacific coast, where, by its performance, the "caterpillar" traction engine has proved that it should be successful in the East and South. The important feature of "holding power" is satisfactorily met in the "caterpillar" in the patented drive formed by the two rear wheels on each side running on what is practically a moving track carried by the wheels. This track is made up of steel links, and is, in fact, an endless chain which passes over two sprockets, front and rear. The track wheels run on the inside of the track or endless chain, on the outside of each link of which is a corrugated shoe. This shoe comes in direct contact with the ground and forms a powerful holding element. The company has issued a fully-illustrated catalogue (No. 40) called "Caterpillar Results," which describes the valuable features and gives numerous views of work actually performed by this tractor. Eastern and Southern inquiries should be addressed to the Holt Manufacturing Co. at Peoria.

## FINANCIAL NEWS

The MANUFACTURERS RECORD invites information about Southern financial matters, items of news about new institutions, dividends declared, securities to be issued, openings for new banks, and general discussions of financial subjects bearing upon Southern matters.

#### Review of the Baltimore Market.

##### Office MANUFACTURERS RECORD.

Baltimore, Md., April 12.

There was a fair amount of business in the Baltimore stock market during the past week. United Railways common sold from 18½ to 18¾; do. incomes, 64¼ to 63½; do. funding 58, 85¾ to 86; do. do. scrip, 85¾; United 48, 84¼ to 83¾; Consolidated Gas, Electric Light & Power common, 80½ to 80; do. preferred, 96; do. 4½s, 87¾ to 87¾; do. notes, 99½; Consolidated Gas 4½s, 96½ to 96¼; Seaboard Air Line common, 23½ to 24½, with last sale at 24½; do. preferred, 43¼; Seaboard Company common, 25¾ to 26¾, with last sale at 26; do. first preferred, 84; do. second preferred, 56 to 58, with last sale at 57¾; Seaboard 4s, stamped, 87 to 86¾; do. three-year 5s, 100; do. 10-year 5s, 100; do. adjustment 5s, 76 to 78¼; Consolidated Cotton Duck preferred, 20; Mt. Vernon-Woodberry Cotton Duck 5s, 72¾ to 73; G.B.-S. Brewing incomes, 7; do. 4s, 45¼ to 45.

Bank stock sold as follows: Exchange, 165; Bank of Commerce, 31¼ to 31½; Farmers and Merchants', 50½ to 51; Mechanics', 29; Citizens', 41¼; Merchants', 190; Union, 137¼.

Continental Trust sold at 210; Fidelity & Deposit, 152 to 153; Maryland Casualty, 93 to 93¼; United States Fidelity, 159¼; Maryland Trust preferred, 111.

Other securities were traded in thus: Charleston Consolidated Electric 5s, 96; City & Suburban (Baltimore) 5s, 106; Consolidation Coal, 104 to 106, with last sale at 104½; Northern Central Railway stock, 124 to 123½; Atlantic Coast Line Consolidated 4s, 94 to 94¾; do. convert-

ible debenture 4s, 97½; do. of Connecticut 5-20s, 92¼; do. 4s, certificates, 85; Alabama Consolidated Coal & Iron common, 36¼; do. preferred, 71; do. 5s, 85 to 86; Baltimore City 4s, 195¼, 103¼; do. do. 1926, 101; do. 3½s, 1980, 90¼; Norfolk & Atlantic Terminal 5s, 92; Piedmont & Cumberland 5s, 100¼; West Virginia Central 6s, 100¼; Atlanta Consolidated Street Railway 5s, 105; Norfolk Railway & Light 5s, 99¼ to 101; Anacostia & Potomac 5s, 100¼ to 101; Baltimore Brick common, 2½; do. preferred, 30 to 31; do. 5s, 82¼; Chicago Railway 5s, 99 to 99½; Fairmont & Clarksburg Traction 5s, 99 to 98¾; Georgia, Carolina & Northern 5s, 105 to 105¼; Norfolk & Portsmouth Traction 5s, 88 to 87½; Baltimore Electric 5s, stamped, 91½; Charleston City Railway 5s, 103¼ to 103; Florida Southern 4s, 91½ to 91¾; Georgia & Alabama Consolidated 5s, 104¼ to 105¼; Macon, Dublin & Savannah 5s, 97½; West Penn Traction 5s, 97; Norfolk Railway & Light common, 25¼; Western Maryland 4s, 86¾; Milwaukee Refunding 4½s, 92½ to 92¾; Baltimore, Sparrows Point & Chesapeake 4½s, 97¼; Houston Oil common, 7¼ to 7½; do. preferred, 50½ to 51; Maryland Electric 5s, 98¾; Memphis Street Railway 5s, 97½; Pennsylvania Water & Power common, 60½; Canton Company, Baltimore, 116; Georgia & Florida 5s, 80¼; Merchants & Miners' Transportation Co., voting trust, 76; Virginia Midland 5th, 106¾; Charleston & Western Carolina 5s, 106; Virginia Railway & Power 5s, 92½; Jamison Coal & Coke, George's Creek 5s, 94½.

### SECURITIES AT BALTIMORE.

Last Quotations for the Week Ended April 12, 1911.

Railroad Stocks.	Par.	Bid.	Asked.
At. Coast of Conn.	100	23	29
Charleston Con.	50	34	...
Fair & Clarks, Trac. Com.	100	40	...
Fair & Clarks, Trac. Pfd.	100	77	77½
Ga. Sou. & Fla.	100	28	40
Ga. Sou. & Fla. 1st Pfd.	100	94	...
Macon Ry. & L.	100	85	...
Nor. & Port. Trac. Pfd.	100	78	79½
Seaboard Co. Com.	100	29	2½
Seaboard Co. 1st Pfd.	100	88	87
Seaboard Co. 2d Pfd.	100	87½	87½
United Ryways. & Elec. Co.	50	18½	18½

Bank Stocks.	Par.	Bid.	Asked.
Bank of Baltimore	100	153½	155
Bank of Commerce	15	31½	31½
Citizens'	10	41½	41½
Drovers & Mechanics'	100	222	229
Exchange	100	162½	165
Farmers & Merchants'	40	50½	...
First National	100	148	151
German	100	107	...
German-American	100	108	...
Howard	100	13½	...
Marine	20	26	27½
Mechanics'	10	28½	29
Old Town	10	13	...
Union	100	135	137½
Western	20	40½	...

Trust, Fidelity and Casualty Stocks.	Par.	Bid.	Asked.
American Bonding	25	78	79
Baltimore Trust	100	164	165
Colonial Trust	50	36½	...
Continental Trust	100	210	...
Fidelity & Deposit	50	150	152
Fidelity Trust	100	219½	221½
Maryland Trust	100	110½	111½
Maryland Trust Pfd.	100	143	144½
Merc. Trust & Deposit	50	143	144½
Union Trust	50	70½	...
U. S. Fidelity & Guaranty	100	155	...

Miscellaneous Stocks.	Par.	Bid.	Asked.
Ala. Con. Coal & Iron	100	36	36½
Ala. Con. Coal & Iron Pfd.	100	67	72
Con. Cotton Duck Com.	50	5	...
Con. Cotton Duck Pfd.	50	29	29½
Con. Gas, E. L. & P. Com.	100	90	...
Con. Gas, E. L. & P. Pfd.	100	96	...
Consolidation Coal	100	104	105½
Mer. & Miners' Trans. Co.	100	74	75
Baltimore Brick	100	2½	...
Baltimore Brick Pfd.	100	28	35

Railroad Bonds.	Par.	Bid.	Asked.
Atlantic Coast 1st 4s.	100	94½	94½
At. Coast Conv. Deben. 4s.	100	97½	97½
At. C. Conn. 4s, Cfs. 5-20s.	100	92	94
At. Coast Conn. 5s, Cfs.	100	104	...
Carolina Central 4s.	100	91½	93
Charleston & West. Car 5s.	100	106	106½
Coal & Coke Railway 5s.	100	93	96
Coal & Iron Railway 5s.	100	101	101½
Col. & Green, 1st 6s.	100	95	96
Florida East Coast 4½s.	100	91½	91½
Florida Southern 4s.	100	91¼	91½
Georgia & Alabama 5s.	100	104½	105¼
Georgia & Florida 5s.	100	78	80½
Georgia, Car. & North, 1st 5s.	100	105	105½
Georgia South. & Fla. 1st 5s.	100	106	...
Macon, Dublin & Savannah 5s.	100	97½	98
Maryland & Pennsylvania 4s.	100	88½	89½
Petersburg Class A 5s.	100	107½	...
Petersburg Class B 6s.	100	116½	...
Piedmont & Cumberland 1st 5s.	100	99½	100¼
Potomac Valley 1st 5s.	100	105	...
Raleigh & Aug. 1st 6s.	100	114½	...
Richmond & Danville 6s.	100	106	...
Sav. Fla. & West, 5s.	100	111¼	...
Seaboard Air Line 4s.	100	86½	87
Seaboard 4s, Stamped.	100	86½	87
Seaboard Adjustment 5s.	100	78	...
Seaboard 10-year 5s.	100	100	100½
Seaboard 3-year 5s.	100	100	100½
Seaboard & Roanoke 6s.	100	101	110
Silv. Sngs., Ocala & G. 4s.	100	97½	99
South Bond 5s.	100	102½	103¼
Suffolk & Carolina 5s.	100	106½	107¼
Virginia Midland 5th 5s.	100	107	...
Washington-Vandemere 4½s.	100	94	...
Western Maryland 4s.	100	86½	86½

Western N. C. Con. 6s.	104	...
West Virginia Central 1st 6s.	100¼	...
Wilmington & Weldon 5s.	109½	...

Street Railway Bonds.	Par.	Bid.	Asked.
Anacostia & Potomac 5s.	101	101¼	...
Anacostia & Potomac 5s, Grd.	102½	103	...
Atlanta Con. Street Railway 5s.	105	...	...
Augusta Railway & Electric 5s.	101	104	...
Baltimore City Passenger 5s.	100¼	100¾	...
Baltimore City Passenger 4½s.	100	...	...
Baltimore, Sp. Pt. & C. 4½s.	96	97¼	...
Charleston City Railway 5s.	103	103½	...
Charleston Con. Electric 5s.	95½	...	...
City & Suburban 5s (Balto.)	106¾	...	...
City & Suburban 5s (Wash.)	103¼	...	...
Fairmont & Clarksburg Trac. 5s.	98¾	99	...
Lake Roland Elevated 5s.	109¼	109½	...
Lexington Railway 1st 5s.	87	...	...
Macon Railway & Light 5s.	97½	...	...
Maryland Electric Railways 5s.	98¼	98¾	...
Memphis Street Railway 5s.	97¼	...	...
Metropolitan 5s (Wash.)	106½	...	...
Norfolk & Atlantic Terminal 5s.	91¾	93	...
Norfolk & Atlantic Terminal 5s, P. Notes.	90½	91½	...
Norfolk & Portsmouth Trac. 5s.	87½	87¾	...
Norfolk Railway & Light 5s.	99½	100	...
Norfolk Street Railway 5s.	105½	106	...
Richmond Traction 5s.	104	...	...
United Railways 1st 4s.	83½	83¾	...
United Railways Income 4s.	63¼	63½	...
United Railways Funding 5s.	85¾	86	...

Miscellaneous Bonds.	Par.	Bid.	Asked.
Ala. Con. Coal & Iron 5s.	86	87	...
Baltimore Brick 5s.	82	83	...
Baltimore Electric 5s, Stp.	91½	92½	...
Consolidated Gas 4½s.	96¼	96½	...
Con. Gas, Elec. L. & P. 4½s.	87¾	87¾	...
Con. Gas, Elec. L. & P. Notes.	90½	91½	...
Consolidation Coal Refdg. 4½s.	92	94½	...
Fairmont Coal 1st 5s.	97	97½	...
G. B. S. Brewing 1st 4s.	44½	45	...
G. B. S. Brewing Income 5s.	7	...	...
Maryland Steel Co. 5s.	101	...	...
Mt. Vernon-Woodby Cot. Duck 5s.	72½	73	...
United Elec. L. & P. 4½s.	92	93	...

### SOUTHERN COTTON-MILL STOCKS.

Quotations Furnished by William S. Glenn, Broker, Spartanburg, S. C., for Week Ending April 10.

	Bid.	Asked.
Abbeville Cotton Mills (S. C.)	75	...
Alken Mfg. Co. (S. C.)	80	...
American Spinning Co. (S. C.)	160	...
Anderson Cotton Mills (S. C.)	48	...
Anderson Cot. Mills (S. C.) Pfd.	98	...
Arcadia Mills (S. C.)	98	...
Arkwright Cotton Mills (S. C.)	99	100
Augusta Factory (Ga.)	40	...
Avondale Mills (Ala.)	116	...
Belton Mills (S. C.)	130	138
Brandon Mills (S. C.)	95	103
Brogon Mills (S. C.)	90	...
Cannon Mfg. Co. (N. C.)	135	...
Cabarrus Cotton Mills (N. C.)	139	135
Chadwick Mfg. Co. (N. C.) Pfd.	109	...
Chillicothe Mfg. Co. (S. C.)	170	...
Clifton Mfg. Co. (S. C.)	85	...
Clinton Cotton Mills (S. C.)	120	...
Columbus Mfg. Co. (Ga.)	93	98
Courtney Mfg. Co. (S. C.)	100	...
Dallas Mfg. Co. (Ala.)	99	...
Darlington Mfg. Co. (S. C.)	80	...
D. E. Converse Co. (S. C.)	90	...
Drayton Mills (S. C.)	95	100
Eagle & Phenix Mills (Ga.)	117	...
Easley Cotton Mills (S. C.)	165	175
Enoree Mfg. Co. (S. C.)	50	55
Enoree Mfg. Co. (S. C.) Pfd.	95	100
Enterprise Mfg. Co. (Ga.)	65	75
Exposition Cotton Mills (Ga.)	200	...
Gaffney Mfg. Co. (S. C.)	60	72
Gainesville Cotton Mills (Ga.)	72	80
Glenwood Cotton Mills (S. C.)	150	...
Gluck Mills (S. C.)	102	106
Granby Cot. Mills (S. C.) 1st Pfd.	35	45
Granville Mfg. Co. (S. C.)	140	145
Greenwood Cotton Mills (S. C.)	57	60
Hartsville Cotton Mill (S. C.)	100	102
Henrietta Mills (N. C.)	160	175
Inman Mills (S. C.)	100	108
King Mfg. Co., J. P. (Ga.)	80	85
Lancaster Cotton Mills (S. C.)	130	...
Lancaster Cot. Mills (S. C.) Pfd.	97	100
Langley Mfg. Co. (S. C.)	104	112
Laurens Mills (S. C.)	127	135
Limestone Mills (S. C.)	155	160
Lockhart Mills (S. C.)	68	...
Lockhart Mills (S. C.) Pfd.	90	100
Lorain Cotton Mills (S. C.)	95	100
Maribon Cotton Mills (S. C.)	102	...
Mills Mfg. Co. (S. C.)	102	...
Mollobon Mfg. Co. (S. C.)	95	105
Monaghan Mills (S. C.)	100	...
Monahery Cotton Mills (S. C.)	105	...
Ninety-Six Cotton Mills (S. C.)	130	150
Norris Cotton Mills (S. C.)	121	130
Olympia Cotton Mills (S. C.)	90	...
Orr Cotton Mills (S. C.)	95	...
Pacolet Mfg. Co. (S. C.)	95	100
Pacolet Mfg. Co. (S. C.) Pfd.	95	100
Pelzer Mfg. Co. (S. C.)	102	...
Piedmont Mfg. Co. (S. C.)	175	177
Poe Mfg. Co., F. W. (S. C.)	110	125
Saxon Mills (S. C.)	130	...
Sibley Mfg. Co. (Ga.)	65	68
Spartan Mills (S. C.)	125	132
Trion Mfg. Co. (Ga.)	130	139
Tucapah Mills (S. C.)	310	350
Union-Buffalo (S. C.) 1st Pfd.	74	80
Union-Buffalo (S. C.) 2d Pfd.	16	...
Victor Mfg. Co. (S. C.)	110	115
Warren Mfg. Co. (S. C.)	90	95
Warren Mfg. Co. (S. C.) Pfd.	100	105
Washington Mills (Va.)	28	...
Washington Mills (Va.) Pfd.	106	110
Whitney Mfg. Co. (S. C.)	110	...
Wiscasset Mills (N. C.)	135	...
Woodruff Cotton Mills (S. C.)	110	118
Woodville Cotton Mills (S. C.)	80	100
Watts Mills (S. C.)	80	90
Williamston Mills (S. C.)	120	125

### Manual of Baltimore Securities.

Baker, Watts & Co., bankers, Baltimore, have issued their manual of Baltimore securities for 1911. This valuable book of about 140 pages is better than ever suited to supply the needs of all who are interested in the stocks and bonds dealt in on

the Baltimore Stock Exchange, of which the firm is a prominent member. The publication includes the rule adopted by the courts of Baltimore regarding investments for trust funds and an excellent table showing the high and low prices of securities during 1909 and 1910. It is handsomely bound in blue cloth, and the lettering is in gold.

### FINANCIAL CORPORATIONS.

Ala., Birmingham.—The Alabama Bond Co. is reported to have filed articles of incorporation; capital \$2000; incorporators, E. T. Rice, S. Norwood and John B. Weakley.

Ark., Kingston.—The Bank of Kingston is reported to have filed articles of incorporation; capital \$10,000; J. N. Bunch, president; P. S. Maxwell, vice-president; George W. Basore, secretary; A. B. Bunch, assistant cashier.

Ark., Little Rock.—The German-American Bank & Trust Co. is reported chartered; capital \$100,000; J. J. Smith, president; J. S. Shibley, vice-president; Charles F. Wahl, secretary and treasurer.

Fla., Clearwater.—Official: The People's Bank of Clearwater incorporated; capital \$50,000; L. B. Skinner, president; M. W. Ulmer, vice-president; J. M. Barco, cashier, and T. C. Tallaferra, chairman, board of directors. Business is to begin in about 60 days.

Ga., Atlanta.—The Fidelity Mutual Savings & Trust Co. is reported being organized with \$50,000 capital. W. Woods White, T. R. Sawtell and others are interested.

Ga., Atlanta.—The West End Bank, corner of Lee and Gordon Sts., is reported to have begun business with directors thus: J. J. Sewell, president; Dr. J. C. King, vice-president; Dr. E. L. Connally, vice-president; H. P. Mulkey, cashier; Julian P. Jones, W. O. Field, M. L. Legg, W. M. Poole, J. M. Stevens, Dr. Lee Campbell and C. R. O'Quinn.

Ga., Dearing.—The Bank of Dearing is reported organized with \$25,000 capital.

Ga., Douglas.—The Bank of Douglas is reported chartered; capital \$50,000; incorporators, C. R. Tidwell, E. Willis Dart, Elmo Tanner, C. A. Ward, B. Peterson, Wm. Fussell, J. F. Relihan, J. C. Deen, David Rickertson, L. R. Weinberg, M. H. Turentine, J. E. Mathis, A. D. Corn, J. H. Williams, J. L. Young, J. C. Relihan and others.

Ga., Eatonton.—The Putnam County Mutual Fire Insurance Co. is reported chartered; incorporators, Wiley and William Denham, Robert Young, E. V. Ezzeel, R. G. Stubbs, L. J. Walker and Thomas J. Lawson.

Ga., Palmetto.—The Palmetto Banking Co. is reported to have made application for a charter; capital \$25,000; incorporators, T. E. Culbreath, W. O. Keith, W. D. Johnson, H. T. Daniel and T. R. Knight.

Ga., Sardis.—The Sardis branch of the Citizens' Bank of Savannah is reported to have begun business with W. J. Walker president and G. P. Pearson cashier.

Ga., Savannah.—The Real Estate Bank and Trust Co. is reported to have made application for a charter; capital \$150,000; incorporators, Jacob S. Collins, R. M. Hicks, Thos. Nugent, John E. Foy, Carl Mendel, P. Alston Warring, John Ohlsiek, Joseph A. Logan, W. A. Collins, Benjamin Weitz and Grover C. Paulsen.

La., New Orleans.—Official: The Pan-American Life Insurance Co. incorporated; capital \$1,000,000; surplus \$750,000. Business began April 1 with directors thus: C. H. Ellis, president; S. Locke Breaux, first vice-president; W. B. Thompson, second vice-president; and A. Damsar, third vice-president; J. B. Sinnott, H. B. Schreiber and Eugene J. McGivney.

Md., Baltimore.—The State Bank of Maryland, capital \$50,000, surplus \$125,000, has begun business. William W. Cloud is president.

Okla., Cordell.—Official: The State National Bank, which succeeds the Oklahoma State Bank, is chartered with \$300,000 capital; H. S. Rawley, president; I. L. Hull, cashier, and J. A. Taylor, assistant cashier.

Okla., Custer City.—The People's State National Bank is reported chartered with \$25,000 capital; S. H. Little, president; K. D. Gosum and R. B. Leeka, vice-presidents; G. G. Hostutler, cashier; T. Chatburn, assistant cashier.

Okla., Lahoma.—Official: The First National Bank, which succeeds the Bank of Lahoma and Farmers and Merchants' Bank, both of Lahoma, is chartered with \$25,000 capital. Directors: L. A. Ferrel, president, and H. Muecke, first vice-president, both of Lahoma; A. F. Place, second vice-president,

Humeston, Ia.; F. L. Godfrey, cashier, Lahoma; Mamie P. Ferrel, assistant cashier, and F. G. Walling of Medford. Business began April 1.

Okla., Muldrow.—Official: The First National Bank succeeds the Cherokee State Bank; capital \$25,000. Business began March 31 with R. W. Hines president, L. C. Moore vice-president and Charles Blackard cashier.

Okla., Miami.—Official: The Ottawa Abstract & Loan Co. incorporated; capital \$3000; incorporators, A. Scott Thompson, E. H. Doyle, Mary Doyle and Elsie Thompson. Business is to begin in about 30 days.

Okla., Oklahoma City.—Official: The National Bond & Mortgage Co. incorporated; capital \$100,000; C. H. Everest, president; Clifton Ratliff, vice-president, and W. R. Ramsey, secretary and treasurer. Business is to begin immediately.

Okla., Sayre.—Official: The First National Bank of Sayre, which is a conversion of the First State Bank, is chartered and incorporated; capital \$25,000; incorporators, E. K. Thurmond, C. E. Gaudway, J. P. Thurmond, Guy Ford, A. L. Thurmond and O. H. Thurmond. Business began March 22.

Okla., Skiatook.—Official: The First National Bank of Skiatook, capital \$25,000, began business March 29. Organizers: C. H. Cleveland, president; M. C. Rogers, G. M. January, Skiatook; A. E. Lewis, Bartlesville, and H. F. Sinclair, Independence, Kans.

Okla., Stilwell.—Official: The First National Bank, successor to the Adair County State Bank, chartered;



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Tex., San Benito.—The Farmers' State Guaranty Bank of San Benito, Tex., will, it is reported, open for business April 17 with John T. Lomax of San Benito president, W. E. Hawkins of Brownsville vice-president, and Hulon Sterling, formerly of Houston, cashier.

Va., Dillwyn.—Official: The Buckingham Investment Co. incorporated; capital \$2000 to \$25,000; G. F. Toltrich, president, Fairmont, W. Va.; James L. Anderson, vice-president, and A. W. Carter, secretary and treasurer, both of Dillwyn, Va.

Va., Dillwyn.—A. W. Carter confirms report that he and others propose establishing a national bank at Dillwyn.

W. Va., Bluefield.—Official: The Dollar Savings Bank of Bluefield Incorporated; capital \$25,000; incorporators, J. Lee Harne, Eula Jennings Harne, G. C. Dick, W. C. Given and W. B. Dobyns. Business is to begin about June 1, 1911.

W. Va., Warwood.—The Bank of Warwood, which is to begin business May 1, has elected officers thus: W. E. Holfenbine, president; F. J. Kerr, Warwood, vice-president, and Carl E. Roberts of Loveland, cashier.

### NEW SECURITIES.

Ala., Aliceville.—Press dispatches state that the question of issuing school bonds is reported under consideration.

Ala., Bessemer.—The Bessemer National Bank of Bessemer is reported to have been awarded \$75,000 of funding bonds. J. B. Houston is City Treasurer.

Ala., Cuba.—The question of holding an election to vote on \$12,000 of bonds is reported under consideration.

Ala., New Decatur.—The City Council is reported to have authorized the sale of \$7000 of street bonds.

Ala., Wetumpka.—Official: Bids will be received until noon May 2 for \$70,000 of 5 per cent. 30-year Elmore county road-improvement bonds; denomination \$1000. Address M. D. Still, clerk of the Court of County Commissioners.

Ark., Texarkana.—Official: Bids will be received by A. B. Little, secretary and treasurer School Commissioners, until April 15 for \$100,000 of 5 per cent. high-school bonds; dated June 1, 1911; maturity 1913 to 1928; denomination \$500.

Fla., Lake Butler.—An official letter confirms report that it is proposed to issue bonds. Bonding ordinance will come up for its third reading and final passage May 3. Joe H. Williams is City Attorney.

Fla., Palm Beach.—Official: April 4 an election was held to vote on \$60,000 of 5 per cent. 30-year street, sewer, seawall and dock bonds; denomination \$500. J. B. McGinley is Mayor.

Ga., Americus.—Reported voted: \$105,000 of street, sewer and water-works bonds.

Ga., Athens.—The Board of Education is reported to have recommended an issue of \$125,000 of school bonds.

Ga., Blakely.—April 22, it is reported, an election is to be held to vote on \$60,000 of school-building and sewerage bonds.

Ga., Dawson.—May 10, it is reported, an election is to be held to vote on \$12,500 of school bonds.

Ga., Douglas.—A bond issue for improvements is reported under consideration by the City Council.

Ga., Fairburn.—Official: J. B. McCrary Company, Atlanta, Ga., purchased the \$30,000 of 5 per cent. water-works and electric-light bonds voted January 14, 1911; dated May 1, 1911; maturity, two bonds each year.

Ga., Gordon.—An official letter says that "town will not issue any bonds soon."

Ga., Milan.—J. C. Pickron, Mayor, will, it is reported, receive bids until April 15 for \$3000 of 5 per cent. bonds; denomination \$1000.

Ga., Roberta.—Official: Voted: \$5000 of 5 per cent. 20-year school bonds; denomination \$500; date of opening bids not yet decided. Address J. S. Sandefur.

Ga., Macon.—Press dispatches now state that an election will be held next fall to vote on \$100,000 of road, \$200,000 of bridge, \$100,000 of courthouse, \$25,000 of jail and \$100,000 of high-school bonds.

Ga., Savannah.—The question of issuing improvement bonds is reported under consideration.

La., Coushatta.—Official: Bonds for school building are to be issued, bearing 5 per cent. interest.

La., Lake Charles.—Press dispatches state

that a contract has been closed for the sale of \$125,000 of sewerage district bonds.

La., New Orleans.—Bids will be received until noon May 8 for \$7,000,000 of 4 per cent. public improvement bonds. Address T. Wolfe, Jr., secretary Board of Liquidation City Debt.

La., Shreveport.—Reported that L. H. Baker, Secretary-Treasurer, will receive bids until 10 A. M. May 9 for \$250,000 of 4½ per cent. public-improvement bonds. This issue is to take the place of a like amount of its voted in 1909.

Md., Baltimore.—May 2 city will vote on \$10,000,000 sewerage loan, \$5,000,000 paving loan and \$2,500,000 Annex improvement loan. J. Barry Mahool is Mayor.

Md., Baltimore.—City Register Thomas has purchased for the sinking fund \$291,000 of sewerage stock.

Md., Cumberland.—Official: May 16 an election is to be held, it is reported, to vote on \$500,000 of water-improvement bonds.

Md., Ridgely.—Reported that an election is to be held April 24 to vote on sewerage bonds.

Miss., Bassfield.—Reported voted: Water-works bonds.

Miss., Bay St. Louis.—Bids will be received until noon May 1 for \$25,000 of 6 per cent. 50-year Hancock county public roads and bridge-building bonds. Address E. H. Hoffman, clerk.

Miss., Greenville.—The William R. Compton Bond & Mortgage Co. of St. Louis is reported to have purchased \$100,000 of 5 per cent. 30-year Washington county refunding courthouse and jail bonds at a premium of \$3073.

Miss., Hattiesburg.—April 25 an election is to be held to vote on school bonds.

Miss., Newton.—The \$11,000 of electric-light plant bonds recently reported sold are said to have been purchased by the Bank of Newton at a premium of \$175.

Miss., Newton.—Reported that on April 26 an election is to be held to vote on \$25,000 of school-building bonds.

Miss., Rolling Fork.—Official: Bids will be opened May 1 for \$50,000 of 5 per cent. 40-year Sharkey county road and bridge bonds; denomination \$1000. Address H. C. Greer, County Treasurer.

Mo., Moberly.—Whitaker & Co., St. Louis, are reported to have been awarded at par \$50,000 of 5 per cent. 10-20-year water-works bonds.

Mo., Sedalia.—Reported that an election is to be held in Pettis county May 16 to vote on \$400,000 of 4½ per cent. road bonds. A later report gives the amount as \$350,000.

N. C., Concord.—Bids will be received until noon May 9 for \$105,000 of 4½ per cent. bonds of Cabarrus county. C. W. Swing is treasurer.

N. C., Elizabeth City.—S. A. Kean & Co., Chicago, Ill., is reported to have been awarded at \$1224 premium \$120,000 of municipal improvement bonds.

N. C., Hamlet.—Press dispatches state that an election is to be held May 2 to vote on \$5000 of additional street-improvement bonds. Address E. A. Lackey, commissioner.

N. C., Hendersonville.—May 2, it is reported, an election will be held to vote on \$15,000 of school-building bonds.

N. C., Morehead.—Cutter, May & Co. of Chicago, Ill., purchased the \$20,000 of 5½ per cent. 30-year water-works bonds; denomination \$1000.

N. C., Franklinton.—Reported that bids will be received until noon April 28 for \$30,000 of 5½ per cent. 30-year Franklinton township road bonds; dated May 1, 1911; maturity May 1, 1911.

N. C., Oxford.—The Hillyer Trust Co. of Atlanta purchased the \$20,000 of school-building bonds of Oxford, N. C. J. P. Stedman is treasurer board of trustees.

N. C., Pittsboro.—Official: Bids will be received by B. Noce, Mayor, until 2 o'clock May 5 for \$5000 of 5 per cent. 30-year street-improvement bonds.

N. C., Winston-Salem.—Official: Security Trust Co., Spartanburg, S. C., on April 1 purchased \$55,000 of 4½ per cent. and \$45,000 of 5 per cent. 30-year refunding public improvement bonds; denomination \$1000; dated May 1, 1911; maturity May 1, 1911. Address Mayor and Finance Commissioners.

Okla., Brinkman.—Official: The Greer Bond & Investment Co. of Magnum, Okla., has purchased \$12,000 of 6 per cent. 20-year bonds of Consolidated School District No. 1, Greer county. W. H. Sumralt is clerk.

Okla., Earlsboro.—Official: G. I. Gilbert, Oklahoma City, has purchased \$10,000 of 6

per cent. 10-20-year bonds of School District No. 34, Pottawatomie county; denomination \$500. G. H. Strain is clerk of District No. 34.

Okla., Eufaula.—Speer & Dow of Fort Smith are reported to have purchased \$900 of 6 per cent. bonds of District No. 40 and \$16,000 of 6 per cent. 20-year bonds of District No. 1, McIntosh county.

Okla., Guthrie.—May 3, it is reported, an election is to be held to vote on \$100,000 of park bonds.

Okla., McAlester.—An election is to be held April 22, it is reported, to vote on \$8000 of water-works bonds.

Okla., Poteau.—Speer & Dow of Fort Smith are reported to have purchased \$15,000 of 6 per cent. 20-year bonds of District 2 and \$4000 of 7 per cent. bonds of District 47, LeFlore county.

Okla., Sentinel.—Official: Bids will be received until 8:30 P. M. April 28 for \$12,000 of electric-light and \$3000 of water-main extension 6 per cent. 25-year bonds; denomination \$1000. Address J. B. King, president board of trustees; J. M. Terry is Town Clerk.

S. C., Greenville.—R. M. Marshall & Co. of Charleston is reported to have been awarded at 1.02 1-32 the \$7000 of 5 per cent. refunding school bonds.

S. C., Greenville.—Official: Election will probably be held in May to vote on school bonds. P. T. Wayne is secretary School Board.

S. C., Manning.—Official: Bids will be received until noon April 26 by Davis & Weinberg, attorneys for the board of trustees of School District No. 20, Clarendon county, for \$1000 of 5, 5½ and 6 per cent. 30-year bonds; J. C. Dennis, D. L. Green and S. C. Turbeville, trustees of School District No. 20.

S. C., Prosperity.—An official letter confirms report that an election will be held April 18 to vote on \$3000 of 6 per cent. five-year bonds to retire 20-year outstanding bonds. Bonds are issued by School District No. 14, Newberry county. Geo. Y. Hunter is chairman.

S. C., Spartanburg.—Official: Bids will be received by J. B. Carlisle, Clerk and Treasurer, until May 1 for \$11,000 of 4½ per cent. 20-year refunding bonds; denomination \$50; dated July 1, 1911; maturity July 1, 1931.

Tenn., Benton.—James H. Williamson, chairman County Court Polk county, has been authorized to sell \$50,000 of highway and bridge bonds and \$25,000 of school bonds.

Tenn., Bristol.—Reported that a bill has been passed authorizing the issuing of \$40,000 of water-works bonds.

Tenn., Knoxville.—The Knox County Court is reported to have ordered the sale of \$50,000 of 5 per cent. high-school bonds.

Tenn., Maryville.—Reported voted: \$300,000 of 10-40-year Blount county pike bonds; C. F. Cooper, F. P. Winkle and E. S. Hitch, Pike Commissioners.

Tenn., Memphis.—An official letter says that the present session of the Legislature has authorized certain bond issues which will probably be issued by the city some time in the early fall. Ennis M. Douglas is City Clerk.

Tenn., Springfield.—Reported voted: \$15,000 of school-building bonds.

Tex., Angleton.—Reported voted: \$100,000 of Brazoria county bridge bonds.

Tex., Austin.—The Attorney-General has approved the following bonds: \$23,500 of 5 per cent. 20-40-year water-works bonds of St. Augustine; \$25,000 of 5 per cent. 10-40-year bonds of Caldwell County Road District 21.

Tex., Austin.—The Attorney-General has approved \$204,500 of 5 per cent. 10-30-year bonds of Drainage District No. 1, Cameron county. John Bartlett is County Judge; \$25,000 of 5 per cent. 10-40-year bonds of Caldwell county road district No. 21; \$2,050,000 of 5 per cent. 20-40-year Fort Worth city bonds; \$23,500 of 5 per cent. 20-40-year water-works bonds of St. Augustine.

Tex., Brady.—Official: Voted—\$15,000 of road and \$4000 of water-works 5 per cent. bonds. Issue has not yet been approved.

Tex., Brookshire.—Brookshire Independent School District is reported to have sold \$8000 of school-building bonds. V. M. Donigan is secretary.

Tex., Brady.—Official: Voted: \$75,000 of 5 per cent. 40-year bonds of Road District No. 1, McCulloch county.

Tex., Batson.—Bids will be received until April 14, inclusive, for \$10,000 of 5 per cent. 20-year bonds of common school district No. 18. Address T. I. Monihan.

Tex., Canadian.—Official: Sutherland & Co., Kansas City, Mo., has purchased \$10,000 of 6 per cent. 40-year street-improvement bonds; denomination \$50; dated April 10, 1911. J. S. Hood is Mayor; T. M. Berry is City Clerk.

Tex., Cameron.—An official letter confirms reported sale of \$15,000 of sewerage bonds.

Tex., Dallas.—Reported that an election is to be held April 29 to vote on \$1000 of bonds of common school district No. 38. It is also stated that an election is to be held to vote on \$3000 of bonds of school district No. 45.

Tex., Flatonia.—Official: Bids will be opened April 15 for \$12,500 of 5 per cent. 40-year school bonds; denomination \$100; dated January 2, 1911; maturity January 2, 1951. Address C. E. Nesrsta, acting city attorney.

Tex., Grapeland.—Reported that an election is to be held to vote on \$10,000 of school-building bonds.

Tex., Lampasas.—Official: Bids will be opened April 20 for \$6000 of 5 per cent. 10-40-year Lampasas county bridge bonds; denomination \$500. Address W. M. White, County Judge; J. E. Morgan is County Clerk.

Tex., Liberty.—May 16, it is reported, an election is to be held to vote on \$250,000 of Liberty county road-improvement bonds.

Tex., Loving.—Reported voted: \$3500 of schoolhouse bonds.

Tex., Luling.—Reported voted: \$50,000 of Precinct No. 2 Caldwell county road bonds.

Tex., Maxwell.—Official letter confirms report that \$4000 of 5 per cent. school bonds were purchased by the State School Board.

Tex., Memphis.—Official: Voted: \$25,000 of 5 per cent. 40-year bonds of Road District No. 1, Hall county. S. G. Alexander is clerk.

Tex., McGregor.—Official: Voted: \$15,000 of 5 per cent. 10-40-year high-school building bonds; denomination \$500. Bids will be asked as soon as issue is approved by Attorney-General. Address Geo. H. Caulfield.

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Tex., Nederland.—J. T. Sluter & Co., San Antonio, according to press dispatches, has purchased \$20,000 of 6 per cent. 30-40-year school-building bonds.

Tex., Nocona.—Official: May 8 an election is to be held to vote on \$17,500 of 5 per cent. 20-40-year water-works bonds; dated May 8, 1911; denomination \$500. J. L. Davis is secretary.

Tex., Palestine.—April 18, it is reported, an election is to be held to vote on \$20,000 of 5 per cent. 40-year school district building bonds.

Tex., Paris.—Reported that bids will be received by Judd Wright, City Secretary, until 7:30 P. M. April 17 for \$25,000 of street-improvement, \$15,000 of school-building and \$10,000 of public-building 5 per cent. 10-50-year bonds; denomination \$1000; dated May 10, 1911.

Tex., Polytechnic.—Reported voted: \$30,000 of water-works bonds. Another bond issue of about \$20,000 for sewerage system is said to be contemplated. J. R. Thoms is Mayor.

Tex., San Angelo.—Official: Bids will be received until 8 P. M. May 1 for \$20,000 of 5 per cent. 15-30-year street-improvement bonds; denomination \$1000. Address City Secretary.

Tex., Sweetwater.—Official: \$150,000 of 6 per cent. 40-year water-works improvement bonds are being offered; denomination \$1000. Address Ben Anthony, secretary-treasurer.

Tex., Tenaha.—Reported voted: \$3500 of school-building bonds.

Tex., Tulla.—Reported voted: \$25,000 of water-works bonds.

Tex., Yorktown.—Reported that an election is ordered for May 6 to vote on \$6000 of water bonds.

Tex., Waxahachie.—W. M. R. Compton & Co. of St. Louis are reported to have purchased at par \$544,000 of 5 per cent. 40-year Ellis county road bonds.

Tex., Weatherford.—A Chicago firm is reported to have purchased \$15,000 of city hall bonds.

Va., Amherst.—Official: Woodin, McNear & Moore, Chicago, purchased at \$200 premium the \$135,000 of 5 per cent. 34-year Amherst county road improvement bonds; denomination \$1000. Address W. E. Sandidge, County Clerk. Bonds dated March 1, 1911, to be delivered June 1, 1911.

Va., Boydton.—An official letter says that nothing definite has been decided as yet as to the amount of bonds to be issued for permanent road building in Mecklenburg county, but that it is proposed to hold elections some time this year for bonds to build roads in Boydton, South Hill, Palmer Springs and Bluestone districts. H. F. Hutcheson is County Clerk.

Va., Luray.—Official: The First National Bank of Port Allegany, Pa., will purchase the \$10,000 of 4½ per cent. 1-10-year additional water-supply bonds, for which bids will be opened April 20; denomination \$500; dated May 1, 1911. Address J. R. McNealy, Luray, Va.

Va., Highland Park, P. O. Richmond.—Reported voted: \$50,000 of water, street and sidewalk improvement bonds.

Va., Victoria.—Official: Voted: \$9000 of 5 per cent. high-school building bonds; denomination \$100. Bonds will not be issued until election is confirmed by the Circuit Court. Address J. T. Waddill.

W. Va., Bluefield.—Press dispatches state that East River District will vote \$50,000 of school-building bonds.

W. Va., Romney.—Bids will be received until 8 P. M. May 1 by A. N. McKeever, Mayor, for \$15,000 of 5 per cent. 20-year water bonds.

W. Va., Middlebourne.—Reported that on April 22 Ellsworth district of Tyler county will vote on \$125,000 of bonds in aid of the proposed Clarksburg Northern Railroad.

W. Va., Wellsburg.—April 11, it is reported, an election was held to vote on \$85,000 of school district building bonds.

W. Va., Wheeling.—The election to vote on \$200,000 to \$300,000 of filtration-plant bonds will, it is reported, be held May 25.

At Concord, N. C., bids will be received until noon May 9 for \$105,000 of 4½ per cent. Cabarrus county bonds. Further particulars will be found in the advertising columns.

Willmot, Ark., will on June 1 offer at public auction bonds of Drainage District No. 1, Ashley county. Further particulars will be found in the advertising columns.

At Wetumpka, Ala., bids will be received until noon May 2 for \$70,000 of 5 per cent. 30-

year Elmore county road bonds. Further particulars will be found in the advertising columns.

At Manning, S. C., bids will be received until noon April 26 for \$100 of 5, 5½ and 6 per cent. 30-year bonds of school district No. 20. Further particulars will be found in the advertising columns.

Sweetwater, Tex., is offering for sale \$150,000 of 6 per cent. 40-year water-works improvement bonds. Further particulars will be found in the advertising columns.

At Concord, N. C., bids will be received until noon April 19 for \$50,000 of 30-year water-works improvement bonds; interest not exceeding 5 per cent. Further particulars will be found in the advertising columns.

At Sentinel, Okla., bids will be received until 8:30 P. M. April 29 for \$12,000 of electric-light and \$3000 of water-works 6 per cent. bonds; denomination \$1000; dated March 1, 1911; maturity March 1, 1936. Further particulars will be found in the advertising columns.

#### FINANCIAL NOTES.

The Griffin Banking Co. of Griffin, Ga., is reported to have increased its capital from \$50,000 to \$100,000.

The Hampstead Bank of Hampstead, Md., has filed a petition to increase its capital from \$10,000 to \$20,000.

The Farmers' Guaranty State Bank of Kemp, Tex., is reported to have increased its capital from \$10,000 to \$25,000.

The Citizens' Bank & Trust Co. and the Bartlesville National Bank, both at Bartlesville, Okla., are reported to have merged.

The People's Bank of Orangeburg, S. C., is reported to be considering the question of increasing its capital from \$30,000 to \$50,000.

The conversion of the County Savings Bank of Darlington, S. C., into the Carolina National Bank of Darlington, with \$50,000 capital, is reported approved.

The Atlantic Permanent Building and Loan Association of Beckley, W. Va., proposes, it is reported, to increase its capital from \$1,500,000 to \$2,500,000. Dr. I. A. Norpeet is president.

The Trust Company of Georgia, at Atlanta, Ga., which recently increased its capital stock to \$1,000,000 and surplus to \$600,000, is reported to have secured a controlling interest in the Atlanta Title Guarantee Co.

The University Savings Bank of Athens, Ga., has, according to press dispatches, amended its charter changing its name to the American State Bank and increasing its capital from \$40,000 to \$60,000.

The Standard Savings and Loan Association of Frankfort, Ky., has, according to press dispatches, changed its name to the Standard Savings, Building and Loan Asso-

ciation and increased its capital from \$50,000 to \$100,000.

The firm of Meyer & Goldman, 401 Empire Bldg., Birmingham, Ala., bankers, brokers and insurance agents, has recently been appointed general agent of the Philadelphia Casualty Co. of Philadelphia, Pa., for the State of Alabama.

A condensed statement of 690 State banks in Oklahoma at close of business March 7 shows loans and discounts, \$38,976,597; due from banks, \$17,513,043; cash in banks, \$4,131,217; capital stock paid in, \$11,158,250; surplus fund, \$1,321,080; undivided profits, \$1,128,599; due to banks, \$3,694,281; individual deposits, \$49,723,977; total resources, \$68,546,420.

A condensed statement of 196 State banks in Louisiana at close of business March 14 shows demand loans, \$17,062,086; loans secured by mortgage, \$15,508,044; other loans and discounts, \$32,901,431; due from banks and bankers, \$17,056,617; capital stock paid in, \$13,962,300; surplus, \$7,273,352; undivided profits less expenses and taxes paid, \$2,119,655; due to other banks and bankers, \$10,452,146; individual deposits subject to check, \$44,294,217; time and demand certificates of deposit, \$5,453,504; total resources, \$113,146,029.

The "Kewanee" Union is the Leakless Union

NATIONAL TUBE COMPANY, Pittsburgh, Pa.



## Put Yourself in His Place

**T**HIS man inside the fire lines is watching his property burn. What does it mean to him? What would it mean to you if you were in his place? Would you be face to face with disaster or would you watch the smouldering remnants of your property with your mind occupied with plans for business rehabilitation, because somewhere in the ruins is the safe containing the indestructible financial soul of your business—your fire insurance policy?

If this happens to your property, you can plan with absolute certainty if your policy is in the **Hartford**, because for more than a hundred years it has been furnishing just this kind of business protection and has never failed to make good an honest loss.

It has paid 140 Millions for claims on property of its policy holders. This is larger indemnity than has ever been paid by any other American company.



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# Classified Opportunities

## AGENTS AND SALESMEN WANTED

**ROCKPORT.** Uncle Sam's newest and greatest deep-water harbor of the South. Well-located lots for \$100; easy payments. Live agents wanted. Write W. H. Sartain, owner, San Antonio, Texas.

**EXPERIENCED,** capable and reliable tank, culvert and sheet-metal products salesman wanted to travel Southern territory. Permanent situation and liberal salary to competent man who has established trade. Address in confidence, stating references, age, present employer and salary expected, Postoffice Box 741, New Orleans, La.

**WANTED—Real salesmen** acquainted with building and contract work to handle concrete mixers. The American is a batch mixer giving a perfect mix either wet or dry. It is sold under a liberal commission arrangement without requiring any financial investment by the agent. A good seller in other sections and should prove attractive in the South with pushing. Address Cargill Mfg. Co., 567 Buttrick Ave., Columbus, O.

## SUPERINTENDENT WANTED

**WANTED—Superintendent** for sash and door factory; product yellow pine; must be up to date and competent or not considered. State age, experience, references and salary expected. Perkins Mfg. Co., Augusta, Ga.

## SITUATIONS WANTED

**WANTED—Connection** with reliable party who desires superintendent who can make money; heavy construction work preferred; concrete a specialty; also practical office man. Address No. 780, care Manufacturers Record.

**CHANGE of location** desired by superintendent with 18 years' coal-mining experience; age 31; speaks Spanish; would take contract where there was a chance for a good man to make money; best of references. Address No. 776, care Manufacturers Record.

**WANTED—Position** as superintendent, manager, manufacturing plant, engineering shop, by mechanical engineer, draftsman; 10 years shop, 15 years designing, estimating, construction; practical man. Address No. 774, care Manufacturers Record.

**WANTED—Position** as secretary of industrial club, board of trade or chamber of commerce; young man who can get the goods; best references. Baxter Genoble, Bethune, S.C.

**WANTED—Position** as Southern representative for a reliable Eastern or Western house by young man of wide acquaintance among manufacturing industries, architects and engineers of the South. Seven years' experience. Teetotaler. Absolutely reliable and trustworthy. Can give highest possible recommendations. Address No. 768, care of Manufacturers Record.

## EDUCATIONAL

**RENSSELAER POLYTECHNIC INSTITUTE, TROY, N. Y.** Courses in Civil, Mechanical and Electrical engineering, and General Science, leading to the degrees of Civil Engineer (C.E.), Mechanical Engineer (M.E.), Electrical Engineer (E.E.), and Bachelor of Science (B.S.). Special courses in engineering and science. Splendidly equipped new engineering laboratories. Send for catalogues to Registrar.

## BANKS

**THE CITIZENS' BANK OF NORFOLK, Va.,** capital \$300,000, surplus \$375,000, solicits accounts of banks, firms, corporations and individuals.

**COMMERCIAL STATE BANK, Birmingham, Ala.** State depository. Prompt attention to Alabama collections.

**THE PALMETTO NATIONAL BANK, Columbia, S. C.,** capital \$250,000, solicits accounts of banks, firms, corporations and individuals, either commercial or savings accounts.

## ACCOUNTANTS AND AUDITORS

**SHELDON AUDIT COMPANY,** certified public accountants and auditors, Candler Building, Atlanta, Ga. Audits, systems, examinations. Highest testimonials. Reasonable charges. Correspondence solicited.

## BUSINESS OPPORTUNITIES

**OLD-ESTABLISHED** builders' supply company in best city in Texas wants active, experienced partner; strictly first-class man; must have some cash, but will make liberal terms to right man. Address No. 777, care Manufacturers Record.

**LOUISIANA LAND RECLAMATION.**—We want in one block 5000 up to 100,000 acres prairie lands to reclaim at our expense with our own dredges on half ownership of land. Address particulars, Drainage Contractors, Box 592, Ita Bena, Miss.

**WANTED—A man** thoroughly competent to operate a mitten, shirt and overall factory, who will put up dollar for dollar with us to invest in the business. Retail Merchants' Association, Gainesville, Tex.

**Rate 20 cents per line per insertion. Minimum space accepted, four lines. Maximum space accepted, 24 lines. Allow seven words per line. Terms: Invariably cash with order; check, postoffice or express order or stamps accepted. No display type used. Questionable or undesirable advertisements will not be accepted. The assistance of our readers in excluding undesirable advertisements is requested. We reserve the right to refuse any advertisement. No patent medicine, whiskey or mining stock advertisements accepted. Rate for special contracts covering space used as desired within one year, as follows: 100 lines, 18c. per line; 300 lines 16c. per line; 500 lines or more, 15c. per line.**

**FLYING NEWS.**—Published monthly, \$1 a year; single copies 10 cts. Aeronautics, aviation, wireless telegraphy. Mechanics and others find work, and may learn to be aviators and wireless operators free. Agents and correspondents wanted. Address The Publisher of Flying News, Brunswick, Ga.

**BUILDERS AND CARPENTERS.**—Increase your business by doing slate roofing. For particulars write No. 779, care Manufacturers Record.

**FOR SALE.**—Fine mineral springs; 80 acres land; 7 distinct mineral waters; hotel and cottages; near important railroad junction; small fortune for moderate investment. Virgil McClure, Lexington, Ky.

**FOR SALE BY OWNERS.**—Manufacturing plant with 2400 acres of timber land, in the north Mississippi oak belt; 32 cottages, commissary, stables, drykline, and factory buildings with 18,000 ft. floor space; 200 H. P. steam plant; inexhaustible supply of deep-well water; railroad station, sidetrack, etc.; good farm land when the timber is removed; a fine proposition for getting out rough or finished stock for factory requiring oak or hickory. Address H. J. S., Pyland, Miss.

**A PRACTICAL FURNITURE MAN** wishes to join others in manufacturing business on a small or large basis. Address No. 769, care Manufacturers Record.

**WANTED.**—A stone company with financial standing very satisfactory, which was organized and incorporated two years ago, wants an experienced and practical man to invest and operate plant for grinding white limestone; located on two railroads and the Mississippi River. Address No. 768, care Manufacturers Record.

**SAN ANTONIO, TEXAS.**—Apartment Site. Splendid location for high-class tourist apartments or hotel; ground 141x116, corner. Price \$60,000. Ray M. Mackey, 118 E. Houston St., San Antonio, Texas.

**IF YOU HAVE STANDING TIMBER FOR SALE,** list it with us. We will find a buyer. We cannot undertake to sell anything not worth the money. Branchville Timber Co., Branchville, Va.

## TYPEWRITERS

**ENTERPRISE EXCHANGE, INC.,** 609 E. Baltimore St., Baltimore, Md.; remanufacture typewriters, all makes; three days' examination allowed; catalogue upon request; full line of ribbons, carbons and papers.

**TYPEWRITERS.**—Real Remington, \$12.00; Calligraphs, \$6.00; Hammonds, Yost, Denmoors or Williams, \$12.00; Smith Premiers, \$15.00; Olivers, \$21.00; Underwoods, \$25.00. Fifteen days' free trial, and year's guarantee. Four typewriter ribbons, \$1.00. Typewriter Exchange, Dept. M. R., 211 West 125th St., New York City.

**REMINGTON, \$18.75.** This is your opportunity. Write at once for the most interesting proposition ever made. We are the final word. Standard Typewriter Exchange, 23 Park Row, New York.

## MONEY WANTED

**CAN USE \$50,000** for five or ten years at 5 per cent.; will give first mortgage on farm property at 40 per cent. valuation. B. E. Norvell, Bay City, Texas.

## LOCATIONS

**WHY PALMETTO LEADS.**—The \$60,000 boxes of fruits and early vegetables attests the superiority of soil, climate and irrigation necessary to produce such crops. The ease with which such crops are handled by rail and water make it an ideal place for fruit and vegetable growing. The Manatee River, Terra Cina and Tampa bays furnish ideal salt-water fishing, boating and bathing. For further information address The Manatee River Board of Trade, Palmetto, Florida.

## FACTORY SITES

**FREE SITES** and other liberal assistance; cheap fuel; natural gas, oil, coal and abundant water; six railroads. Address Chamber of Commerce, Wichita Falls, Texas.

**FACTORY SITES.**—Free sites and other concessions for factories; center of the greatest coal field in the West; excellent shipping facilities; need cottonseed-oil mill, furniture factory, tile and brick factory and cement-plant. Industrial Club, Hartshorne, Okla.

## INDUSTRIES WANTED

### STEAM LAUNDRY

**THEY WANT A LAUNDRY THERE.**—The citizens of a fine town in a Southeastern State, on the line of the Southern Railway, need a steam laundry badly, and are anxious to co-operate with parties of experience with capital sufficient; an excellent opening, and the best of patronage assured. Refer to File No. 21,630, and address M. V. Richards, Land and Industrial Agent, Southern Railway, Washington, D. C.

### MISCELLANEOUS

**ALEXANDRIA, LOUISIANA,** situated in the geographical center of the State, with seven railroads and a navigable river, surrounded by magnificent forests of native woods, and in the heart of a splendid agricultural section, offers an ideal location for manufacturing industries. Correspondence solicited. Address Secretary Alexandria Progressive League.

**"BUSIEST AND BEST BUILT CITY IN TEXAS,"** Wichita Falls, possesses unsurpassed natural resources and advantages. Offers exceptional opportunities for investors; free sites for manufacturing establishments; cheap fuel; natural gas, oil, coal, electricity and abundant water from the largest body of water in Texas; six railroads; raw material at hand; latest approved public utilities; creosoted wood block pavement throughout business section; over fifty miles concrete sidewalks. Most rapidly developing city in Southwest. Handsome booklet and detailed information upon request. Address Chamber of Commerce, Wichita Falls, Texas.

**SAN ANTONIO, TEXAS,** with her splendid facilities and ideal climate, is after many other industries, which will receive very substantial encouragement. The Real Estate Exchange will cheerfully furnish information for benefit of industries seeking new locations. Population 96,614. Cheap fuel and labor. Artesian water in abundance. Address J. C. Rice, Secretary, San Antonio, Texas.

**COME TO SHREVEPORT, LOUISIANA.** If you are interested in the manufacture of glass, building brick, paving brick, terracotta, pottery. We have iron ore, rock salt, sulphur close at hand. Natural gas at low price. Oil lands at low price. Fine hardwood and yellow pine timber. Fine farming lands at one-half the price of the same kind of lands in the North or West. Shreveport is well drained and located in the hills of Northwest Louisiana; has good climate. Write for literature. L. C. Bulkley, Secretary.

**VICTORIA, TEXAS,** head of navigation of Guadalupe River; center of cotton, corn, truck and citrus fruit-growing district of South Texas; country rapidly developing; opportunities for many industries. If interested in the coastal section of Texas, write for booklet "D" to the Secretary of the Progressive League.

**MANUFACTURES WANTED.**—Free taxes, water, gas and electricity for five (5) years; three railroads and Ohio River. C. F. Kleiderer, Henderson, Ky.

**STUTTGART** wants a cotton gin and compress, a cottonseed-oil mill, a flour mill, a paper mill, woodworking plants, furniture factory, drain and tile manufacturing plant and a first-class hotel. We have an abundance of the finest quality of raw material for the above-named industries, excellent railroad facilities, water-works, electric-light plants, concrete sidewalks, and it is the intention to pave the streets in the near future. Get a special report on your business from the secretary, Stuttgart Commercial Club, Stuttgart, Arkansas.

## INDUSTRIAL PLANTS FOR SALE

### SAW MILL

**FOR SALE AT A BARGAIN.**—Circular-saw mill, located on Belt Line siding and deep water, in Norfolk, Virginia, together with 2½ acres of land, mill having daily capacity of 30 M. feet and ready for immediate operation. Quick buyer can obtain this at a bargain. South Norfolk Lumber Corporation, Box 230, Norfolk, Virginia.

## REAL ESTATE, MINERAL AND TIMBER LANDS, WATER-POWERS, ETC.

**HUGHES & MONTGOMERY,** timber, cut-over and colonization lands; turpentine, mill and tile positions; orange groves, farm and truck lands. P. O. Box 475, Tampa, Fla.

**VIRGINIA FARMS,** large and small in famous Piedmont section; sunshine and good health; also timber and mineral lands; genuine bargains. By International Farm Agency, Lynchburg, Va.

**TEXAS.**—About 750 acres, 1¼ miles river front, near good town, in path of new railroad San Antonio to Brownsville. Splendid bargain at \$25 per acre. Ray M. Mackey, 118 E. Houston St., San Antonio, Tex.

**\$50,000,000 IN THREE YEARS.**—Invest in Washington real estate. As the nation grows so must its capital city develop. The increased value of Washington real estate in the past three years was approximately \$50,000,000. Did a portion of this represent your profits? We are now placing on the market one of the best-located subdivisions in the choice northwest section, fronting one mile on Sixteenth street, and overlooking the National Rock Creek Park. The future of this section will make this the best investment in the suburbs of the national capital. For plat and full information apply to Robert E. Heater, 411-412-413 Colorado Building, Washington, D. C.

**FOR SALE.**—5000 acres of hardwood timber in Grundy county, Tenn.; will cut 3500 feet to the acre; accessible to railroad; price for timber alone, \$7 per acre. 3700 acres of timber and coal land in Sequatchie county, Tenn.; will cut 6000 feet to the acre, mostly hardwoods, and has two seams of workable coal; price in fee, \$17 per acre; an excellent investment. 60,000 acres of hardwood timber in Louisiana; will cut over 4000 feet to the acre; land will be worth \$20 per acre for agricultural purposes; price in fee, \$8 per acre. If you want coal lands, timber lands or lands suitable for colonization in any of the Southern States, write me. I can supply you at reasonable prices. A. L. Edwards, 424 Stahlman Bldg., Nashville, Tenn.

## COAL MINE FOR SALE

**FOR SALE.**—Cannel coal property in Eastern Kentucky at great bargain; fully equipped; mine-railroad connection; must be closed out to settle an estate; 1700 acres, of which 650 are underlain with three-foot vein of finest grade of cannel coal 120 feet above drainage; entire property underlain with 30-inch seam of cannel coal 80 feet below drainage; 600 feet below drainage entire property underlain with seven-foot vein of finest bituminous coal. L. E. Williams, Louisville Trust Co. Bldg., Louisville, Ky.

**FOR SALE.**—A going split-coal operation on the Chesapeake & Ohio R. R.; present capacity, 200 tons daily; for a comparatively small amount can be increased to 500 tons. Address Box 325, St. Albans, W. Va.

## COAL LAND FOR SALE

**A FINE COAL TRACT.**—2500 acres of the best coal in the State of Tennessee can be purchased for \$25 per acre. The veins faced up show from 4 to 6 feet. The following is the analysis, which we guarantee to be absolutely correct:

Analysis.	Coke.
Moisture.....	1.24..... 1.53
Volatile combustible matter.....	24.64..... .73
Fixed carbon.....	67.49..... 86.08
Ash.....	6.63..... 11.66

Sulphur.....	100.00..... 100.00
Phosphorus.....	.65..... .74
.....	.03..... .04

The property is about three miles from railroad.

R. T. & R. M. Wilson,  
216 Sixth Ave. N., Nashville, Tenn.

**FOR SALE.**—5000 acres Kentucky coal lands; richest section famous Straight Creek district; three veins ranging from four to six feet thick; two above drainage; ample timber; two miles from railroad; big future in this property; now rapidly enhancing in value. L. E. Williams, Louisville Trust Co. Bldg., Louisville, Ky.

**FOR SALE.**—1000 to 3000 acres of coal land. Owner needs money and will sell any part of above property at a sacrifice. Property in Alabama. Address Owner, No. 778, care Manufacturers Record.

## COLONIZATION LAND WANTED

**WANTED.**—Land suitable for immigration purposes; 10,000 to 25,000 acres in the Southern States; either cut-over or Texas land; must be on or near railroad and cheap. Minge Mortgage & Realty Co., 2113 First Ave., Birmingham, Ala.

## MINERAL AND TIMBER LANDS

**FOR SALE.**—112,000 acres New Mexico lands, valuable water-power and minerals; 419,000,000 feet white pine, 3,000,000 ties; particulars furnished to responsible parties. Ben I. Tanner, Cedar Rapids, Iowa.

## MINERAL LAND FOR SALE

**WE CONTROL DELIVERY** of 120,000 acres Tennessee coal, iron and mineral lands, in two separate tracts, one of 85,000 which is valued mainly for its coal. Estimated average of 12,000 tons per acre good coke and domestic coal; also has large deposits of hematite iron ores, marble and lime. Two railways touching it on each side. Every acre can be operated with light expense. Sites already laid out for manufacturing plants. Will sell this tract for \$18.50 per acre. The 35,000 acre tract is located short distance (50 miles on R. R.) from the 85,000 acres; is valued solely for its rich iron ore and lime deposits in large quantities. Both can be worked in connection to immense advantage, giving all the raw material needed right at hand. The whole 120,000 acres delivered on terms of one-fourth down after personal inspection and deferred payments. None but principals need apply. Parties who are in market for best undeveloped land in coal and mineral belt in South, address J. C. Lindley, Greensboro, N. C.



